SEWING MACHINE

Now that you have purchased your Kenmore Sewing Machine, should a need ever exist for repair parts or service, simply contact any Sears Service Center and most Sears, Roebuck and Co. Stores. Be sure to provide all pertinent facts when you call or visit.

The model number of your Sewing Machine will be shown on your nomenclature plate on the back of your Sewing Machine. See page 3 for location.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

*MODEL NUMBER *NAME OF ITEM *PART DESCRIPTION

If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for handling.

SEARS, ROEBUCK AND CO., Chicago, IL 60684 U.S.A.

S 158 Printed in Japan Part No. 55093 (82)

Kenmore

Ultra-Stitch 8

SEWING MACHINE/MODEL 13453

OWNER'S MANUAL

Sears, Roebuck and Co.

Dear Homemaker:

You have just invested in a very fine zigzag sewing machine. Your new Kenmore sewing machine has these great features:

* **Ultra-Stitch** helps make uniform buttonholes and stretch stitches every time. Machine automatically adjusts stitch thickness on forward and reverse stitches so you have fewer adjustments to make when sewing.
* **Select-n-Sew** — When you turn stitch selector to the desired stitch, the proper stitch width is automatically set for optimum sewing performance.
* **Sew-by-Color** — Just match stitch selection and length on color-coded dials and start sewing.

Before you start sewing, please pause for a moment and carefully read this booklet which contains instructions on how to operate and care for your machine.

Specific instructions are given on threading, tension adjustments, cleaning, oiling, etc. This will help you obtain the best sewing results and avoid unnecessary service expense for conditions beyond our control.

Advice on the operation and care of your machine is always available at your nearest Sears Retail Store. Please remember, if you have questions about your machine, always mention the model number and serial number when you inquire.

Kenmore Sewing Machine

Record in space provided below the model number and serial number of this appliance.
The model number and serial number are located on the nomenclature plate, as identified on Page 3 of this booklet.

Model No. _____ Serial No. _____
Retain these numbers for future reference.

TABLE OF CONTENTS

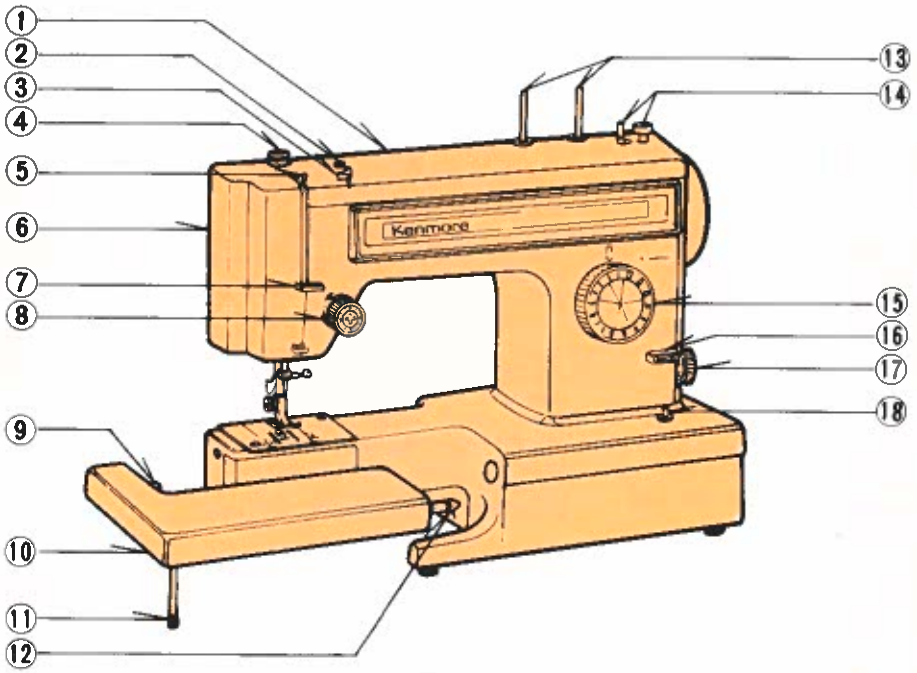
KNOWING YOUR SEWING MACHINE
Machine identification 2
Setting up your machine 4
Installing extension table 4
Winding bobbin 5
Removing bobbin case from shuttle 6
Inserting bobbin into bobbin case 7
Inserting bobbin case into shuttle 7
Threading top thread 8
Picking up bobbin thread 9
Adjusting top thread tension 10
Adjusting bobbin thread tension 10
Stitch selector 11
Stitch length control 11
Reverse stitch control 12
Pressure regulator 12
Seam guides 13
Presser foot lever 13

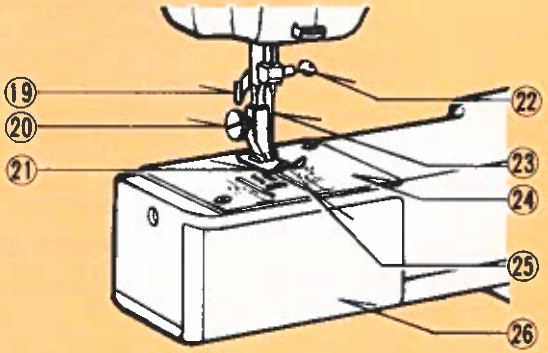
ACCESSORIES
Needles 14
Placement of needle 14
Needle, thread and fabric chart 15
Feed cover plate 16
Presser feet 16
CHECK LIST BEFORE STARTING 17

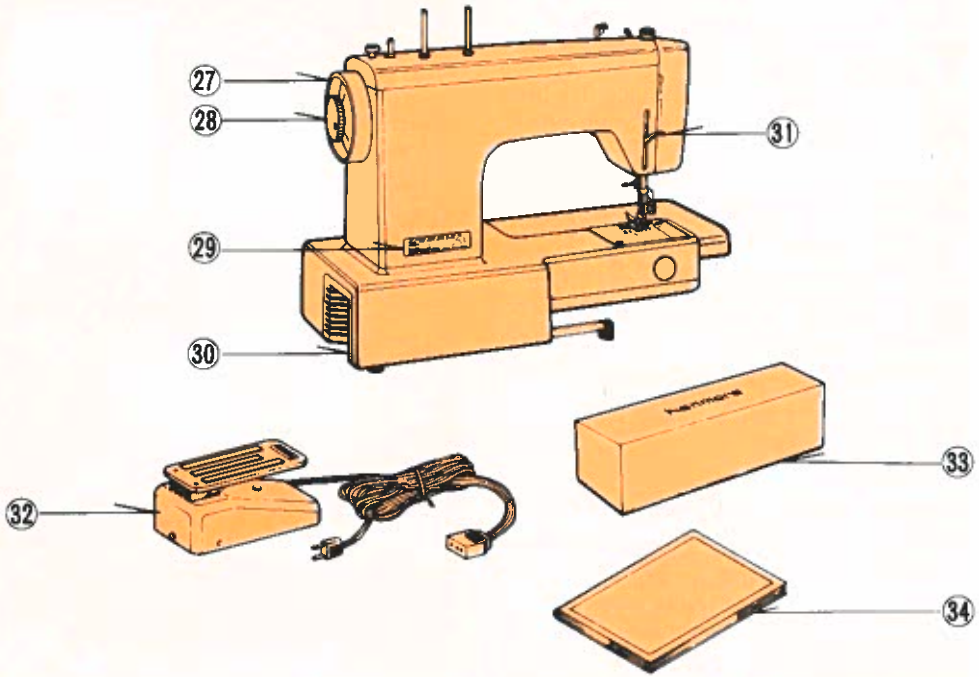
STARTING TO SEW
Straight stitching 18
Fastening a seam, Turning a square corner, Removing fabric, Darning, Zipper application-cording
Zigzag stitching 20
Checking thread tension, Overcasting, Satin stitching, Bar tacking, Appliqueing, Button sewing
Blind Hemming 23
Mending and overcast stitching (three-step zigzag) 24
Buttonhole making 25
Stretch stitches 28
Adjusting stitch length, Straight stretch stitch, Rick-rack stretch stitch, Smocking stretch stitch, Overcast stretch stitch,
Free-arm sewing 33
CHECKING PERFORMANCE PROBLEMS 34

CARING FOR THE MACHINE
Cleaning feed dogs and shuttle 36
Oiling 37
Changing light bulb 39
Parts list 40
USING PORTABLE CASE OR CABINET 42
WARRANTY ..... Inside back cover

MACHINE IDENTIFICATION



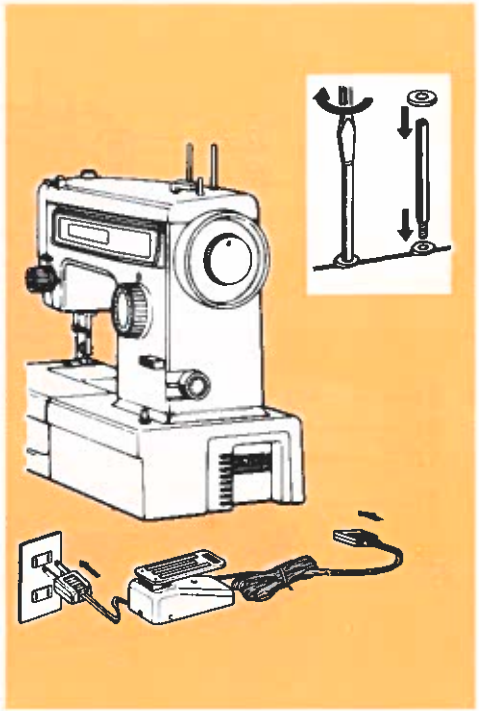




1. Top cover
2. Bobbin winder tension disc
3. Thread guide
4. Pressure regulator
5. Take-up lever
6. Face cover
7. Face cover thread guide
8. Top thread tension control
9. Guide pin
10. Extension table
11. Support leg
12. Guide pin
13. Spool pins
14. Bobbin winder
15. Stitch selector
16. Reverse stitch lever
17. Stitch length dial
18. Light/power switch
19. Thread cutter
20. Presser foot thumb screw
21. Presser foot
22. Needle clamp screw
23. Needle
24. Needle plate
25. Feed dogs
26. Shuttle cover
27. Hand wheel
28. Clutch knob
29. Nomenclature plate
30. Electric cord receptacle
31. Presser foot lever
32. Foot control
33. Accessory box
34. Owner's manual

SETTING UP YOUR MACHINE

1. Install your kenmore sewing machine in a kenmore cabinet, case or set the machine on a sturdy flat surface.
2. Your kenmore sewing machine has been throughly oiled at the factory. Be sure to wipe off the needle plate area, bed plate and bobbin case carefully before sewing a garment. It is wise to practice on a scrap of fabric so any surplus oil is absorbed.
3. You'll find spool pins and nylon discs packed in the accessory box. Using a screwdriver, attach spool pins securely on the top cover and position nylon discs over the spool pins as indicated.
4. Plug foot control into machine receptacle. Then connect cord into any 110-120 volt A. C. wall outlet.



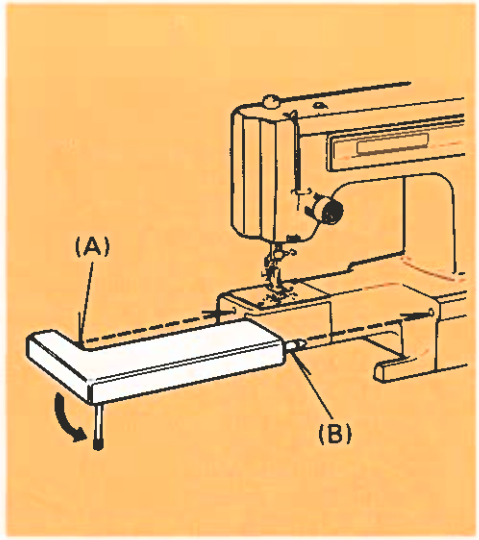
Important safety feature

Your machine **will not operate** unless the light/power switch is turned on. Turning on the power automatically illuminates the whole stitching area. If you're interrupted or stop sewing, turn off light/power switch.

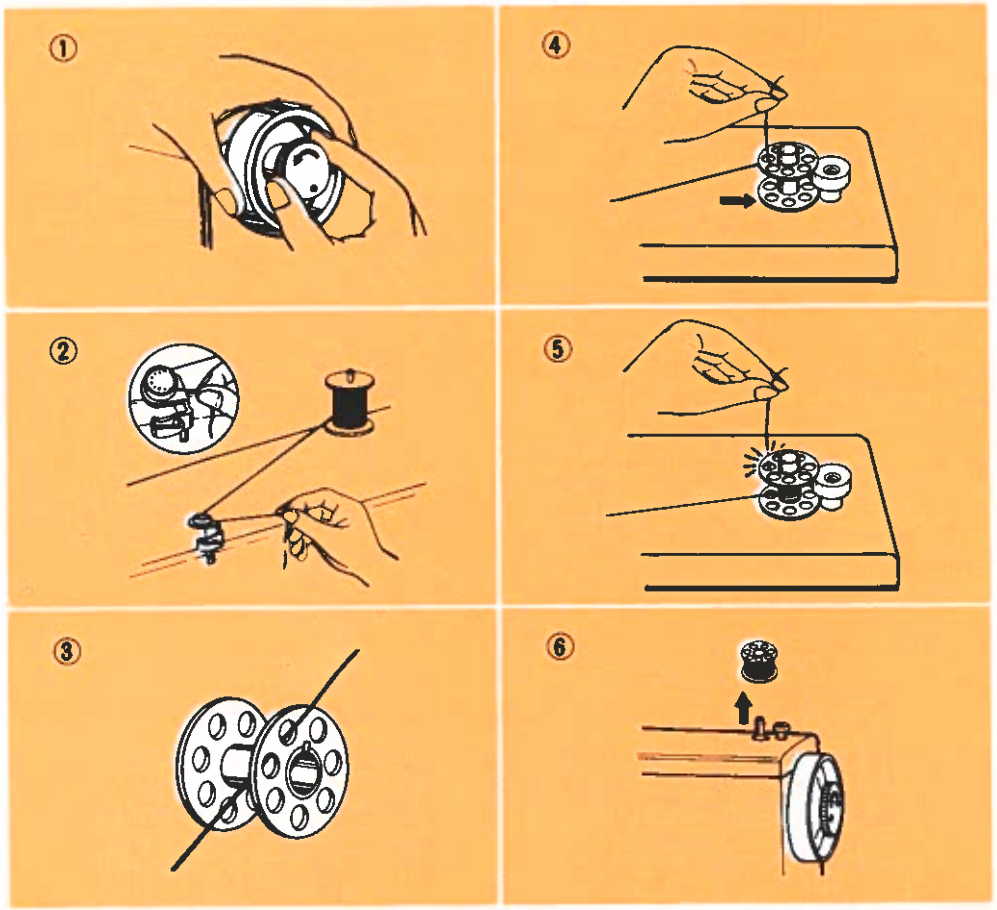
INSTALLING EXTENSION TABLE

For all flat-bed sewing use the extension table provided with the machine. To install the extension table, simply slide the table along the free arm until the two pins (A) and (B) enter fitting holes in the machine. Lower the support leg.

To utilize free-arm feature for sewing tubular material, remove the extension table from the machine by pulling it to the left.

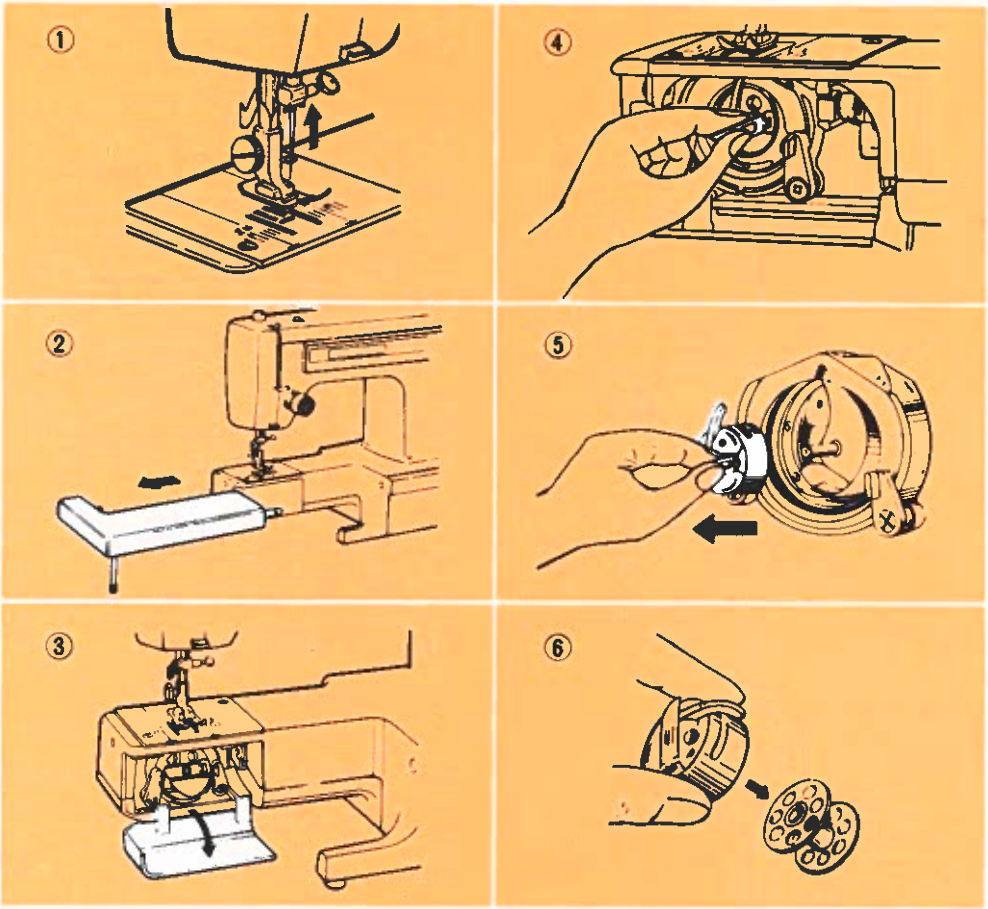


WINDING BOBBIN



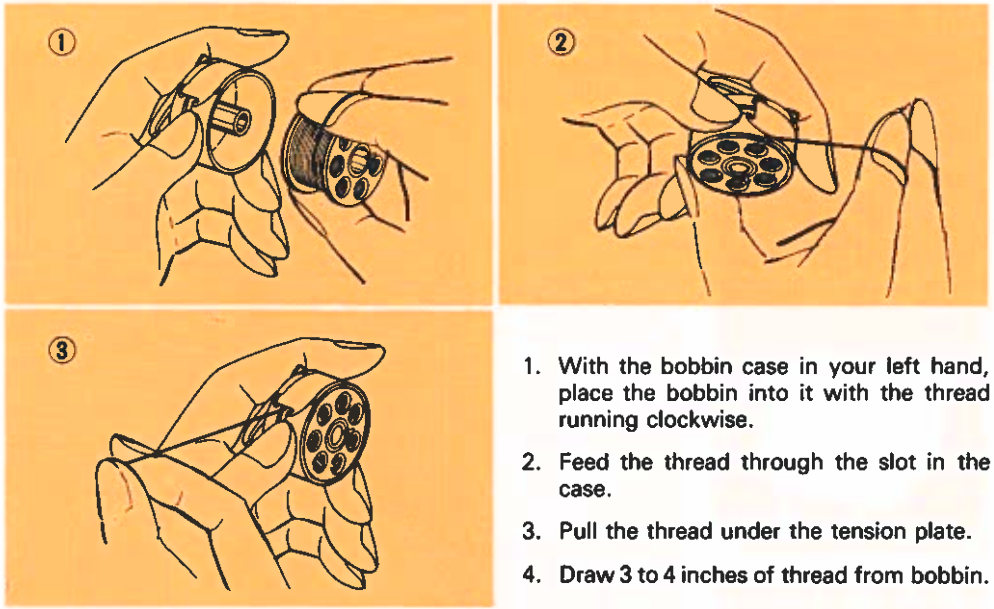
1. Release clutch holding hand wheel and turning clutch knob toward you.
2. Draw thread from spool through bobbin winder tension disc as shown.
3. Pull end of thread through hole in bobbin as shown.
4. Push bobbin winder shaft to far left position, if it is not already there. Place bobbin onto shaft with end of thread coming from top of bobbin. Push bobbin winder shaft to right until it clicks. Hold onto end of thread.
5. Start machine. The thread that is held will snap. Bobbin will cease turning when completely filled. Push shaft to left to remove bobbin.
6. Tighten clutch knob and remove bobbin.

REMOVING BOBBIN CASE FROM SHUTTLE



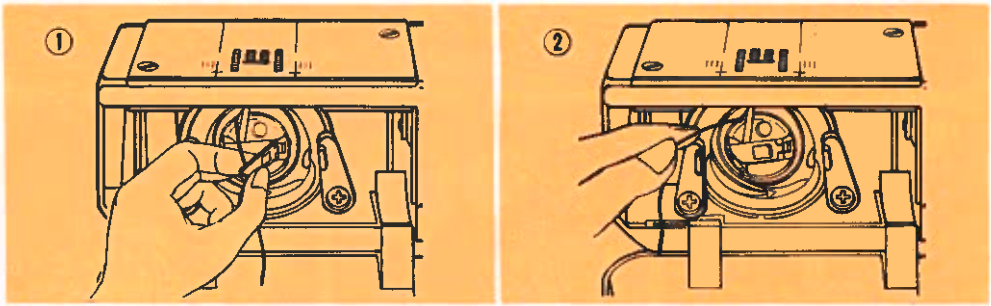
1. Raise needle to its highest position rotating hand wheel toward you.
2. Remove the extension table from machine by pulling it to the left.
3. Open shuttle cover.
4. To remove bobbin case from shuttle, pull open latch of bobbin case.
5. Pull bobbin case straight out of shuttle.
6. Release the latch and bobbin will come out from bobbin case.

INSERTING BOBBIN INTO BOBBIN CASE



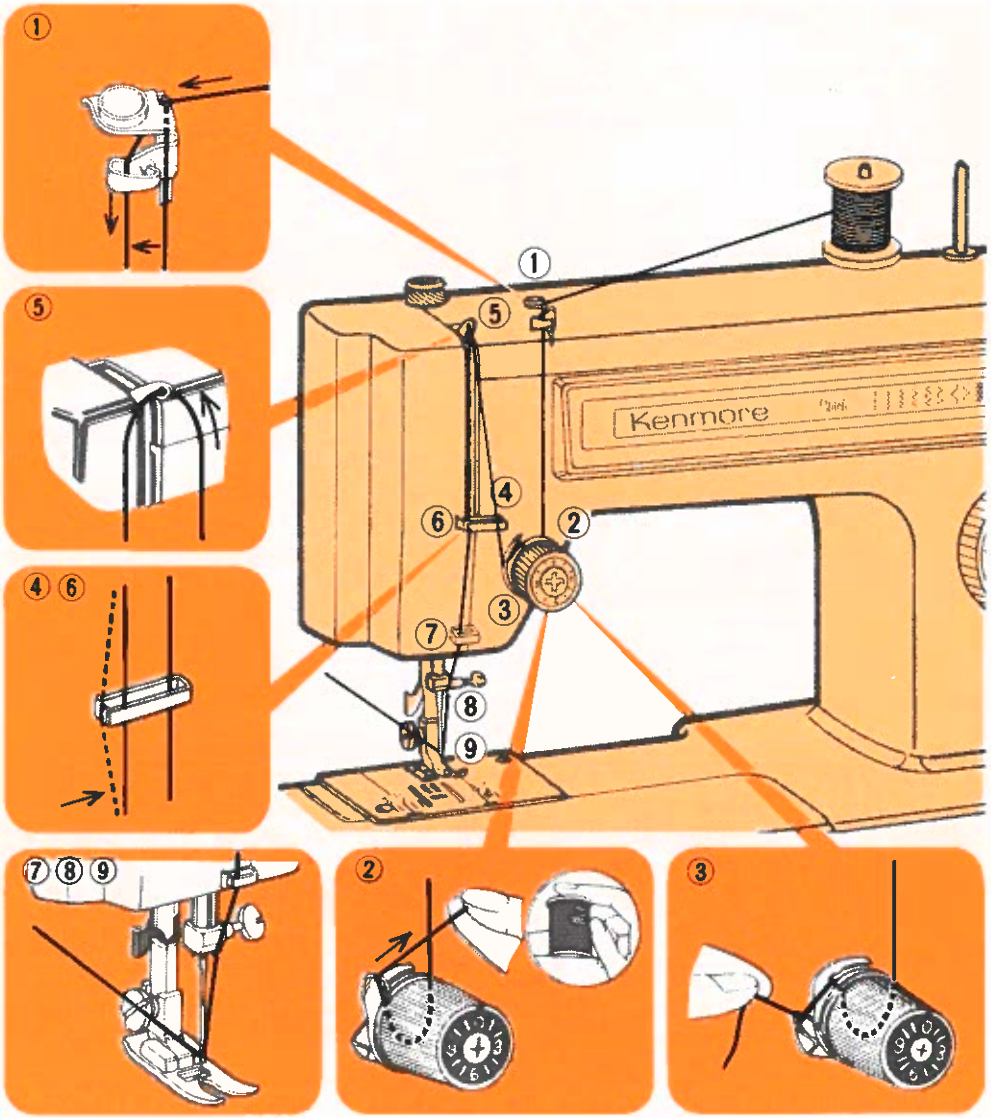
1. With the bobbin case in your left hand, place the bobbin into it with the thread running clockwise.
2. Feed the thread through the slot in the case.
3. Pull the thread under the tension plate.
4. Draw 3 to 4 inches of thread from bobbin.

INSERTING BOBBIN CASE INTO SHUTTLE

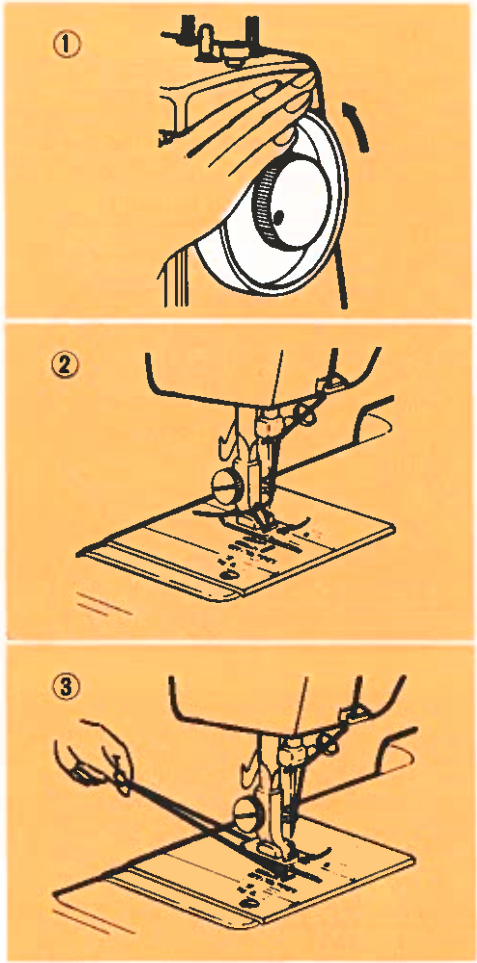


1. With locating pin straight up, hold the latch open, and slide the bobbin case on to the center spindle of the shuttle.
2. Make sure the locating pin fits into the locating groove at the top of the shuttle. Release the latch to lock the bobbin case into place.

THREADING TOP THREAD



1. Raise thread take-up lever to its highest position by turning hand wheel toward you. Raise presser foot lever. Place thread spool on spool pin.
   Draw thread through thread guide 1. Holding spool stationary with right hand, pull thread through the tension discs. Pull the end of the thread taut with the left hand. This will pull the spring wire up and past the end of the hook. The thread will then slip into the hook when the spring is released.
2. Draw thread up through thread guide 4 take-up lever 5 and down through lower thread guides 6, 7, 8 to needle.
3. The needle must be threaded from front to rear. Draw 3 to 4 inches of thread through the eye of needle.



PICKING UP BOBBIN THREAD

1. Raise presser foot lever. Hold needle thread loosely in left hand and rotate handwheel toward you one complete turn.
2. Bring bobbin thread up by pulling upper thread.
3. Pull both threads under and to the back of the presser foot, leaving 3 to 4 inches of thread clear.

If you can not pick up bottom thread by following above steps, then check:

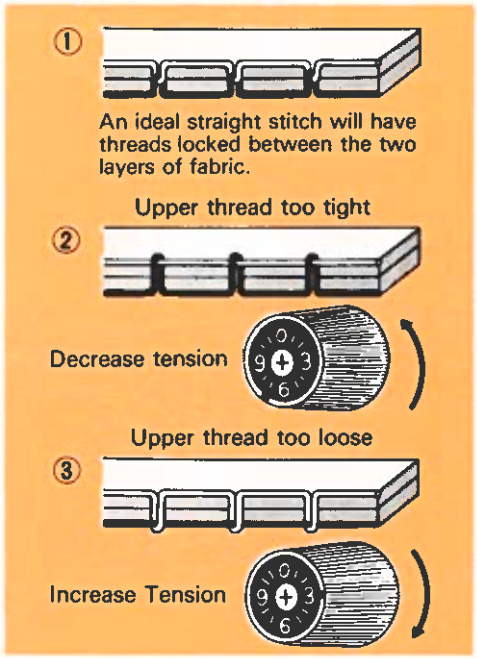
1. Is thread through needle ?
2. Is thread tangled around needle ?
3. Is there 3 to 4 inches of thread coming out of bobbin case ?
4. Is thread from bobbin case tangled ?

ADJUSTING TOP THREAD TENSION

Probably the most important control on your machine is this one that regulates your top thread tension.

There are many reasons for having to reset your tension. The best tension for one fabric may not be correct for another. The required tension depends upon the stiffness of the fabric, thickness of the fabric, numbers of layers of fabric being sewn, as well as the type of stitch you are making.

It is best to test the stitching on a scrap of the fabric you are using before starting to make a garment. Use the straight stitch function as shown at the right.

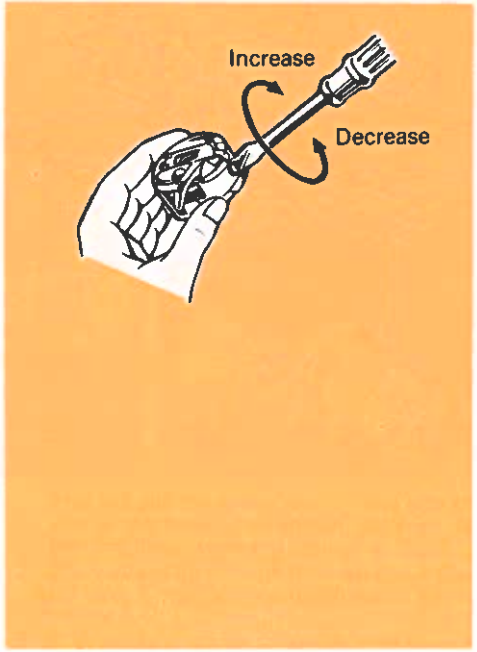


ADJUSTING BOBBIN THREAD TENSION

When stitching is unsatisfactory in figures 2 and 3 above, adjust the upper thread tension. LOWER THREAD TENSION REQUIRES ADJUSTMENT LESS FREQUENTLY THAN THE UPPER THREAD TENSION.

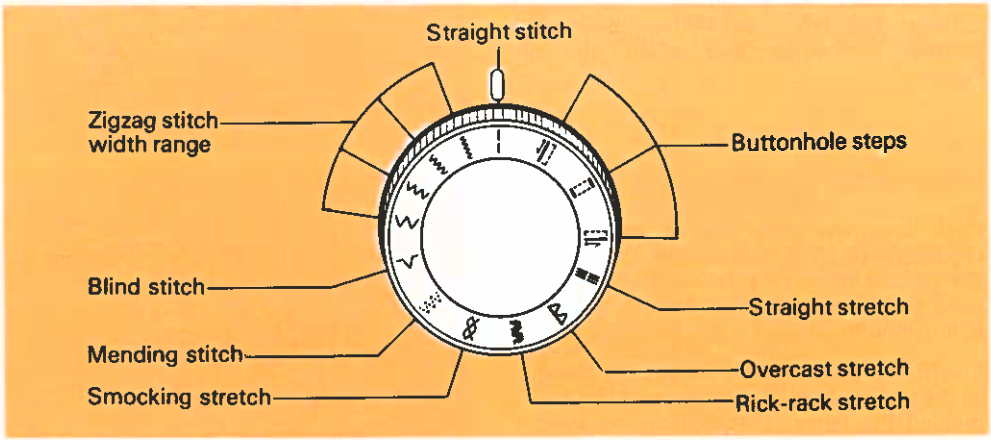
When stitch is satisfactory, as in Fig. 1 and seam is badly puckered, the cause may be tight tensions and both upper and lower may have to be adjusted.

When adjusting the tension on the bobbin case, make slight adjustments with a screwdriver.



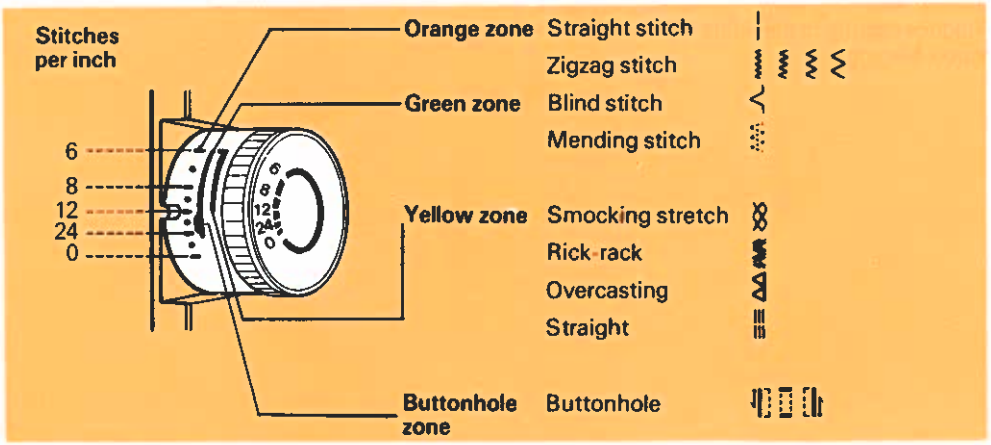
STITCH SELECTOR

There are certain types of stitches that are used more often than others in your garment construction. Because of their frequent use, you will soon realize the convenience offered to you by this control. All of the stitches that are made by this machine are illustrated on the stitch selector dial. You can obtain your desired stitch by simply turning the stitch selector dial.



STITCH LENGTH CONTROL

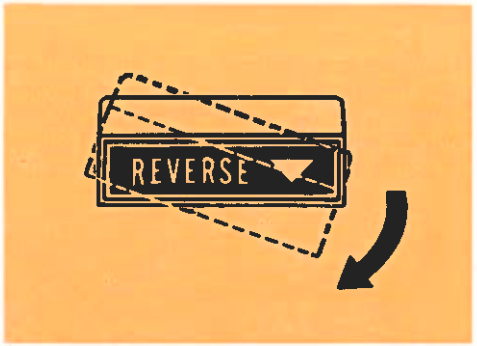
1. Recommended stitch length settings are indicated in three colors and color coded with stitch patterns on the selector.
2. Turn the knob toward you to lengthen a stitch and away from you to shorten.
3. Orange graduation indicates the approximate number of stitches per inch (6-8-12-24) of both straight and zigzag stitches.
4. Stitches per inch are printed on the end of the dial for your convenience.



REVERSE STITCH CONTROL

It is best to begin and end seams with a few stitches taken in reverse. This is called back tacking. Back tacking fastens the ends of the seams firmly and prevents raveling.

When reverse stitching is needed, turn the control clockwise and hold there during sewing. The fabric will immediately start feeding backwards and seam will be fastened.



PRESSURE REGULATOR

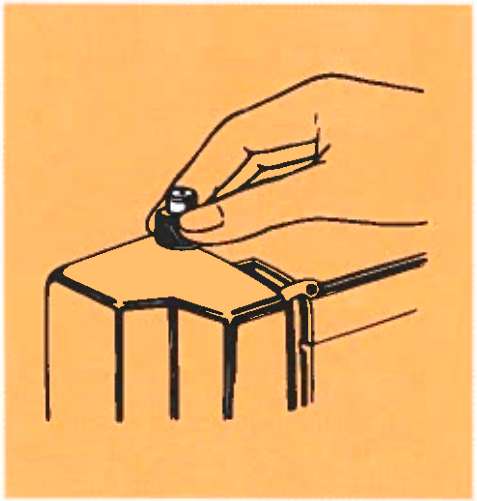
Push down the outer ring of the pressure regulator. This will release the pressure on the presser foot. To increase the pressure, push down inner pin until a suitable pressure is obtained.

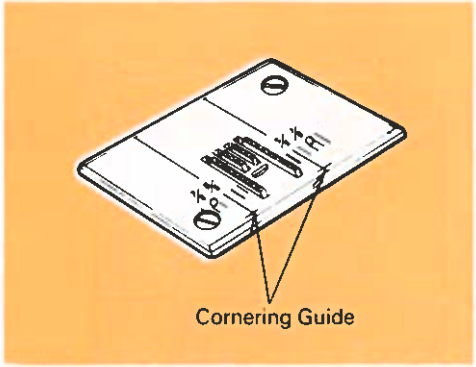
Insufficient pressure may cause poor feeding of the fabric, skipped stitches, or difficulty in guiding the fabric. If feed dogs or presser foot marks appear on the fabric, reduce the pressure.

For sewing of medium weight fabric, the inner pin should be pushed all the way down.

When sewing multiple thicknesses or heavy fabric, reduce the pressure with the pin ½ way down.

Light weight fabrics need full pressure, unless feed dog marks are visible on fabric. Reduce slightly to eliminate marks, but retain good feeding.

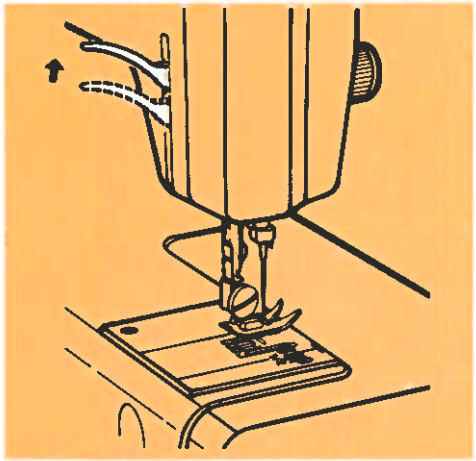




SEAM GUIDES

Seam guides are printed on needle plate, at both sides of needle, to help you line up the fabric and keep it straight. The standard seam width is 5/8". So these lines are emphasized, easy to follow.

Also the cross lines are "cornering guides" to help when turning a square corner 5/8" from the fabric edge. (For details on cornering, see page 18.)



PRESSER FOOT LEVER

Presser foot lever has a two position lift. In order to place heavy fabric under the presser foot or to change the presser foot raise the presser foot lever to its maximum upward position as shown.

NEEDLES

Use KENMORE needles. The size of the needle should conform with the size of the thread and both should suit the fabric. Kenmore needles are color-coded by size for your convenience (See chart on facing page).

Never use a bent needle or one with a dull point.

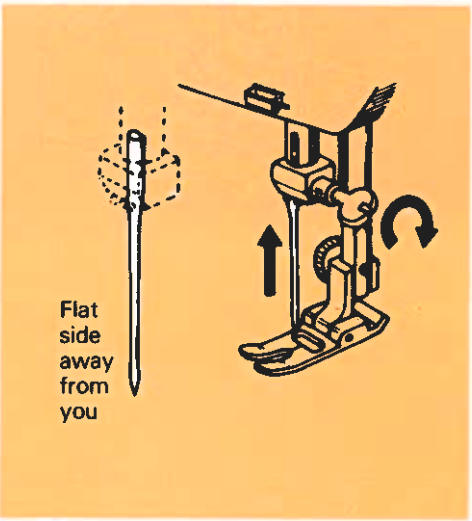
The exact length of your needle is shown at right. Be sure you never use one in your machine that is not this exact length.

You will find among your accessories a "Q NEEDLE"™ with blue shank. This special needle is to be used when sewing knits and certain difficult synthetic fabrics. If you experience **skipped stitches** in any of your sewing, use "Q NEEDLE"™ and "Q FOOT"™ *.

*Available at most Sears retail stores and catalog.

PLACEMENT OF NEEDLE

Raise needle bar to its highest position by turning the hand wheel toward you. Loosen the needle clamp screw. Holding the needle with the **flat side away from you,** slip the needle into the needle bar. When it is in as far as it will go, tighten the needle clamp screw with small screwdriver provided in the accessory box.

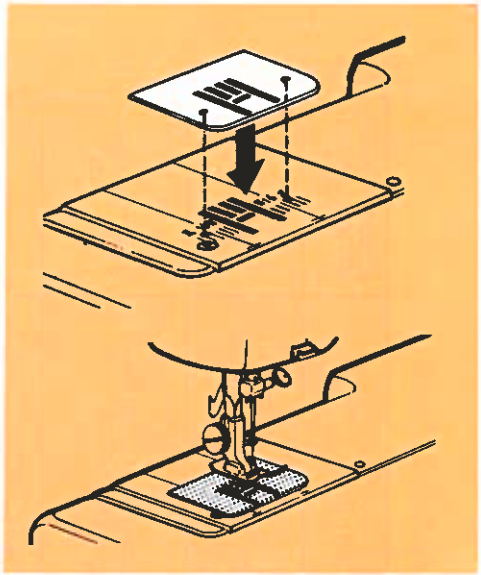


NEEDLE, THREAD AND FABRIC CHART

FABRIC	NEEDLE SIZE AND COLOR	THREAD SIZE	RECOMMENDED STITCH LENGTH SETTING
LIGHTWEIGHT: Batiste, Dimity, Chiffon, Silks, Synthetic Jerseys, Fine Lace, Organza, Crepe, Taffeta, Voile, Organdy	9-BROWN or 11-ORANGE	Polyester Core/Cotton Wrap Fine Mercerized Cotton Silk A	12 stitches per inch
MEDIUMWEIGHT: Cotton, Cotton Blends, Percale, Gingham, Shantung, Pique, Seersucker, Satin, Knits, Vinyl, Suitings, Linen, Wool Crepe, Leather	14-RED	Polyester Core/Cotton Wrap 50 Mercerized Cotton Silk A	10 to 12 stitches per inch
MEDIUM HEAVYWEIGHT: Corduroy, Denim, Wool, Sailcloth, Wool Flannel, Gabardine, Velvets, Leather	14-RED or 16-PURPLE	Polyester Core/Cotton Wrap 50 Mercerized Cotton Mercerized Heavy-Duty Silk A	8 to 10 stitches per inch
HEAVYWEIGHT: Coatings, Upholstery, Cotton Duck, Heavy Twills, Canvas	18-GREEN	Polyester Core/Cotton Wrap Heavy-Duty Mercerized Cotton Polyester Synthetic Silk A	8 stitches per inch
Decorative top-stitching on all types of fabric	16-PURPLE 18-GREEN or Q-BLUE	Buttonhole Twist	6 stitches per inch
Synthetic Knits and Stretch: Polyester Double Knits, Nylon Tricot, Jersey, Stretch Terry, Spandex, Cire Tricot	Q-BLUE with "Q FOOT"™	Polyester Core/Cotton Wrap 50 Mercerized Cotton	10 for Regular or 6 for Stretch Stitches

FEED COVER PLATE

There are a few times when you want to control the feeding of the fabric yourself. Raise needle to its highest position and raise presser foot. Place feed cover plate over needle plate aligning two pins of feed cover plate with holes of needle plate. You may then determine the movement of the fabric yourself.



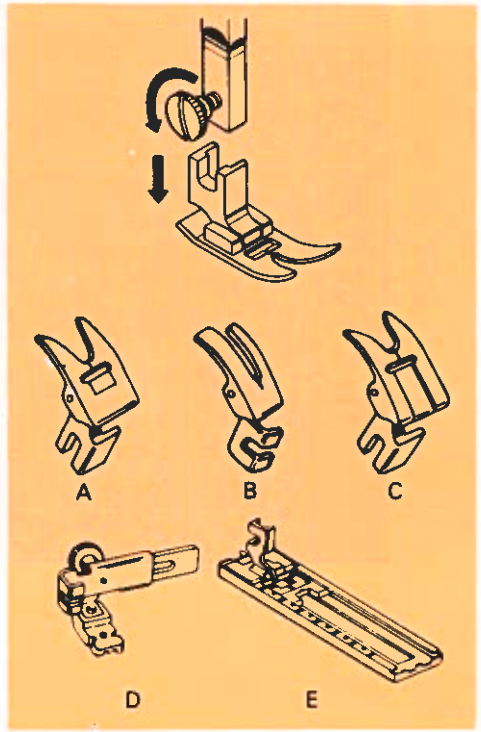
PRESSER FEET

To change the various presser feet, raise the presser bar to its highest position by lifting the presser foot lever (See page 13). Loosen the presser foot thumb screw, choose the proper foot, insert from the front. Lower the presser foot lever and tighten the screw using the large screw driver to make certain the foot is secure.

You have a variety of presser feet:

A. Zigzag Foot
B. Straight Stitch Foot
C. Satin Stitch Foot
D. Zipper Foot
E. Buttonhole Guide Foot

Applications are provided in appropriate sewing section.



READY TO SEW? HERE'S YOUR FINAL CHECKLIST...

Now that you are familiar with the controls on your machine and with the accessories provided for the machine, you are ready to start to sew with your sewing machine. Below are some good habits to follow each time you sit down to sew:

1. Check the needle — it should be straight, properly set and sharp on the point. It should be the correct size for the fabric and thread being used. Do not be afraid to change your needle frequently. Many of the new fabrics made of synthetic blends tend to dull the needles more easily than fabrics made of natural fibers.

2. Before placing the material on the machine, see that the ends of the threads have been drawn about 3 - 4 inches to the rear of the machine. Hold on to threads during the sewing of the first 3 or 4 stitches of the seam.

3. Test the machine stitch on a scrap of fabric you plan to use. The fabric should be double thickness. Adjust the machine for the length of stitch and tension suitable to your fabric.

4. Fabric should be placed under the presser foot with the bulk of the material to the left of the needle and the right edge of the material placed on the 5/8" seam marking on the needle plate when making a simple seam.

5. Run the machine at a slow even speed. The more pressure you put on the foot control, the faster the machine will sew.

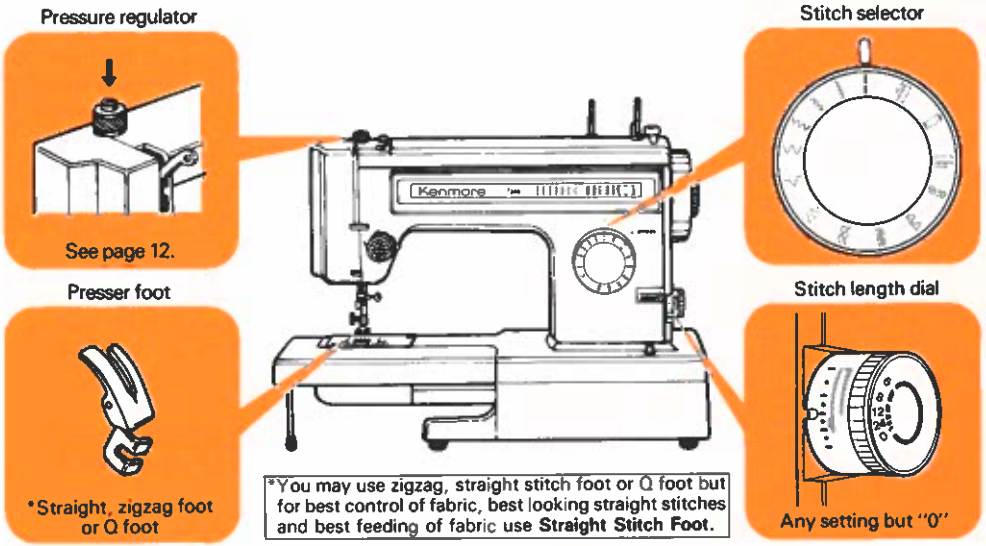
6. Fasten each seam by back tacking at the beginning and end of the seam.

7. Always finish sewing each seam with the needle at its highest point.

8. Guide the fabric gently with your hand in front of the needle. Never pull or hold the fabric in such way that the normal feeding is altered.

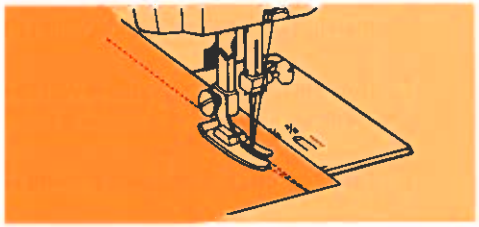
9. When turning the hand wheel manually, always turn it toward you.

STRAIGHT STITCHING


Pressure regulator
See page 12.
Presser foot
*Straight, zigzag foot or Q foot
Stitch selector
Stitch length dial
Any setting but "0"
*You may use zigzag, straight stitch foot or Q foot but for best control of fabric, best looking straight stitches and best feeding of fabric use Straight Stitch Foot.

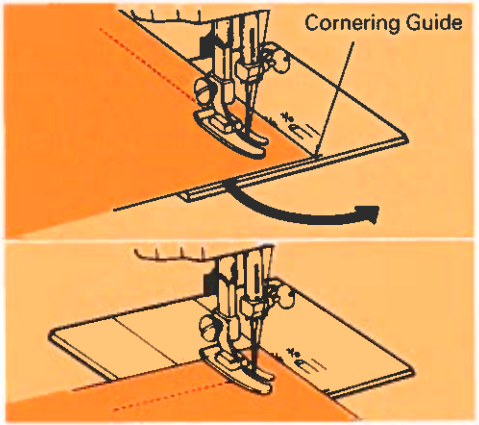
FASTENING A SEAM

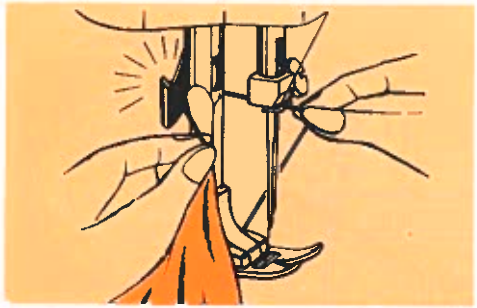
Be sure both threads are drawn back under the presser foot. Lower needle into fabric about 1/2 inch from beginning of seam. Depress the reverse stitch lever and stitch in reverse until needle reaches beginning of seam. Release control and complete seam. When you reach the end, depress the reverse stitch lever and sew back (backtack) over 1/2 inch of completed seam.

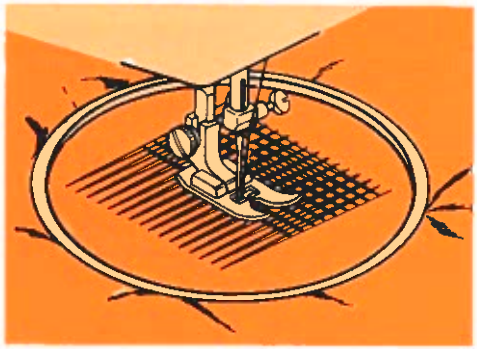


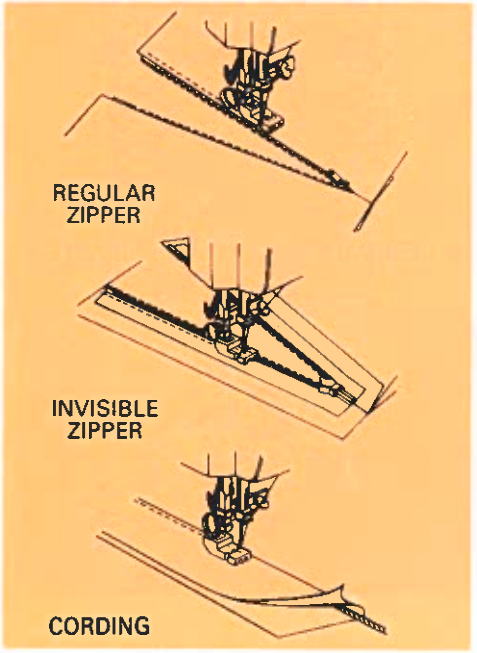
TURNING A SQUARE CORNER

To turn a square corner 5/8" from the fabric edge, stop stitching with the needle piercing the fabric, when reaching the cornering guide as shown. Raise the presser foot, turn fabric. New stitching line will align with 5/8" seam guide on side of needle plate. Lower the presser foot and begin stitching in new direction.









REMOVING FABRIC

First turn the handwheel toward you until the needle is at its highest position, then raise the presser foot, draw materials to the rear and cut off excess thread with the thread cutter located on the presser bar as shown.

DARNING

SETTINGS

Stitch Selector - ¦
Stitch Length - 8 to 10
Zigzag Foot
Release Presser Foot Pressure.

Stretch fabric between embroidery hoops with hole centered. Lower presser bar and sew at a slow speed moving fabric back and forth with a steady rhythm to cover darning area. When it is covered, turn fabric 1/4 a turn and sew layer of stitching across first layer.

If fabric is thin or badly damaged in hole area, you may want to put a separate piece under the hole for reinforcement.

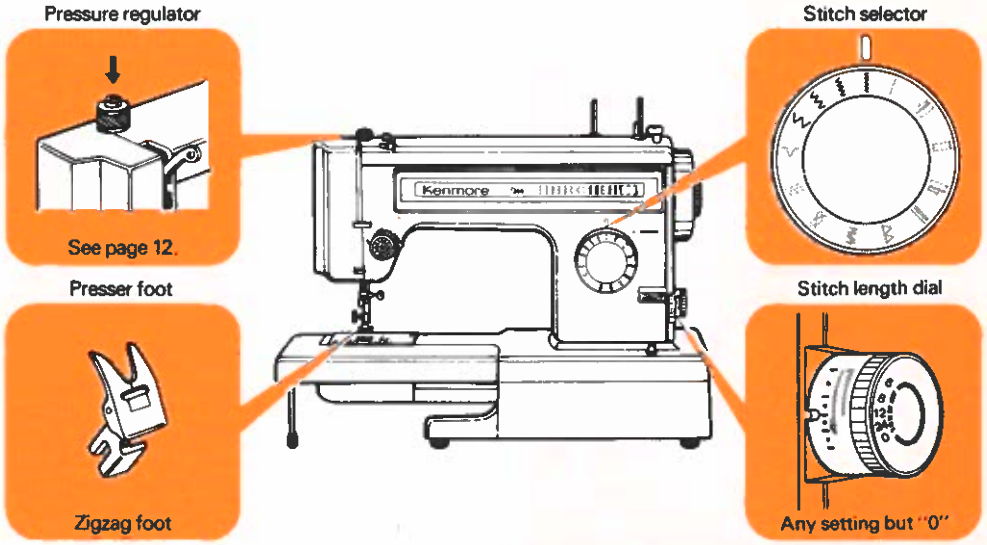
ZIPPER APPLICATION - CORDING

For conventional zippers... Your zipper foot is adjustable for use on right or left side of needle. Adjust foot so needle **clears** side notch on foot. Then proceed according to zipper manufacturer's instructions.

Invisible zippers are applied to an open seam, to seam allowances only; there is **no** stitching visible on **outside** of garment. Adjust zipper foot so needle is sewing **through** center hole of foot and **one** groove of foot is riding on **teeth** of zipper. After zipper insertion, finish by shifting foot to **side** position and sewing through side notch.

Your zipper foot also makes it easy to add "cording" to garments as well as slip covers, toss pillows, bedspreads, decorative pieces. Cut fabric on **bias** and wrap around cord. Pin fabric in place so seam edges are even. With zipper foot to **left** of needle, stitch close to cord.

ZIGZAG STITCHING

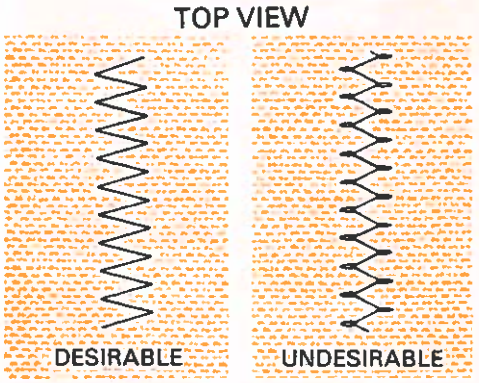


CHECKING THREAD TENSION OF ZIGZAG STITCHES

The easiest way to check tension is to sew a medium zig zag stitch on the fabric you will be using. Use the appropriate type of thread and needle as recommeded on page 15.

Sew a line of zig zag stitches. The bobbin thread should not show on the top of the fabric.

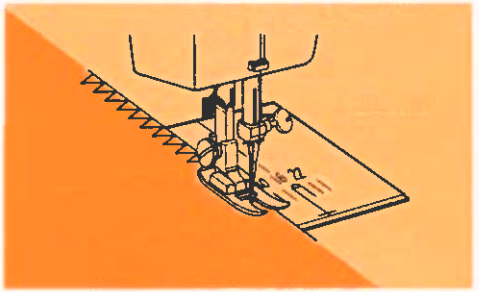
Adjust the top tension if necessary to achieve the stitch indicated at left side of illustration.

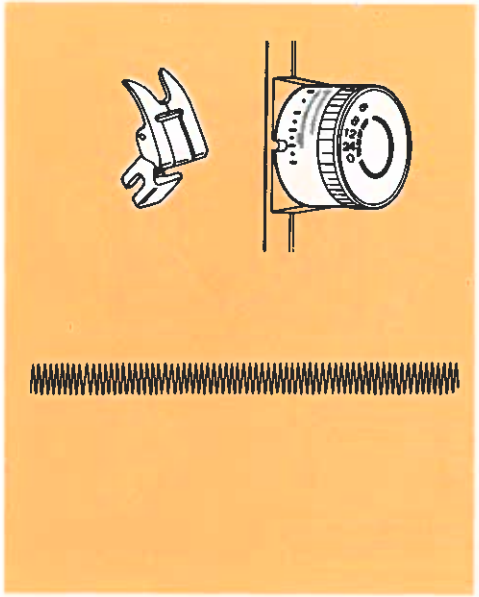


OVERCASTING

This is one of the more frequently used zigzag stitches on garment construction. You may want to overcast along the raw edge of each seam allowance or fold the raw edge toward the garment and stitch.

Stitch so the needle pierces the fabric just short of the outside edge. Raw or worn edges of older garments can be overcast to prevent further raveling.





SATIN STITCHING

SETTINGS

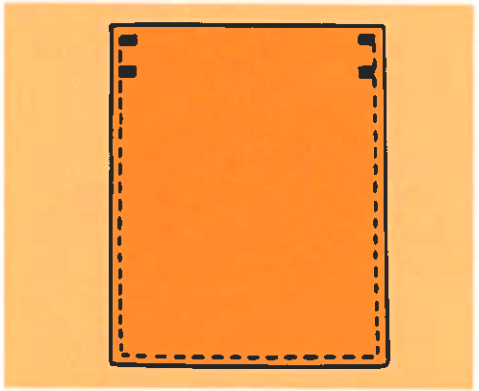
Stitch Selector - Zigzag Stitch
Stitch Length Dial - Between 0 and 24
Satin Stitch Foot

Closely spaced zigzag stitches are called satin stitches. This is an attractive stitch used for appliqueing, bar tacking.

Whenever you are using this stitch, it is well to remember to loosen the tension of the top thread slightly. The wider the stitch you make, the looser the tension should be.

If you are stitching on a very soft fabric, use a backing of tissue paper or interfacing for a well formed stitch. Puckering of the material will be eliminated and the bobbin thread will not be visible on the right side of the fabric.

As with all special stitches, it is best to make a sample design on your fabric before starting the design on the garment.



BAR TACKING

SETTINGS

Stitch Selector - Zigzag Stitch
Stitch Length Dial - Between 0 and 24
Satin Stitch Foot

This stitch is similar to a very short satin stitch and is used to reinforce points of strain such as corners of pockets and straps on lingerie.

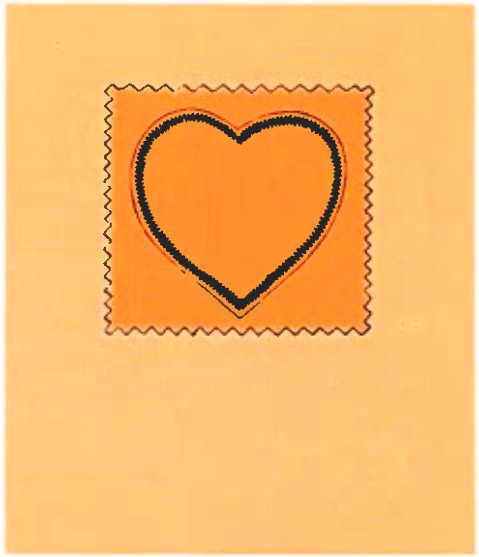
Sew 4 to 6 zigzag stitches.

APPLIQUEING

SETTINGS

Stitch Selector - Zigzag Stitch
Stitch Length Dial - Between 0 and 24
Satin Stitch Foot

Select an applique design to be applied to your garment and baste it in place. Satin stitch around the raw edge of the applique completely covering the edge. You may want to do this with a contrasting color of thread.



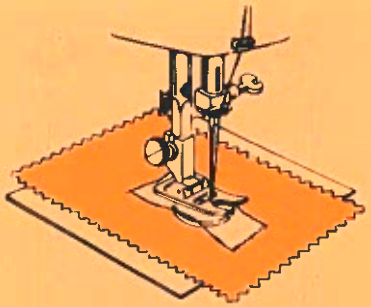
BUTTON SEWING

SETTINGS

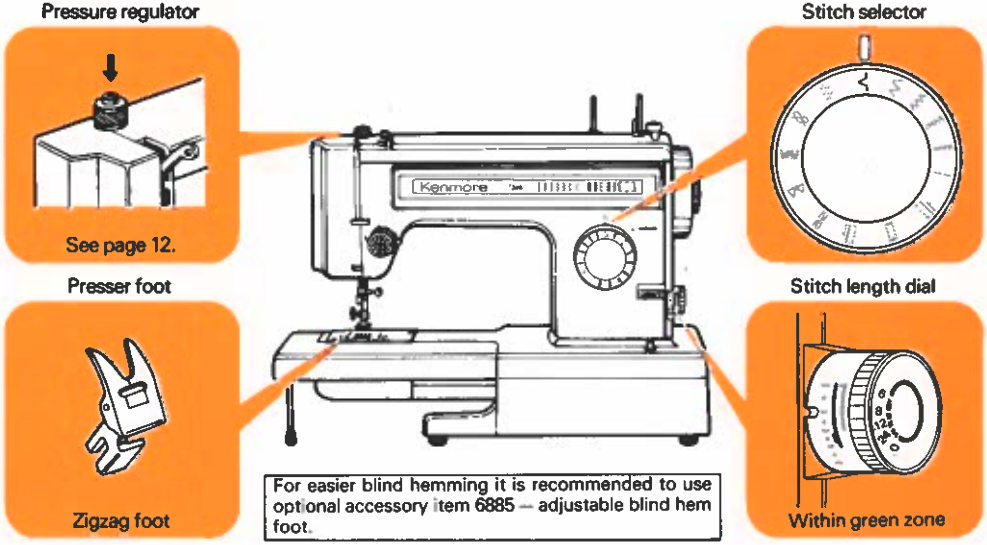
Stitch Selector - Zigzag Stitch
Use Feed Cover Plate.

1. Fix the button on fabric at desired position with clear tape.
2. Align two holes of button with slot of presser foot and lower foot to hold the button securely.
3. Turn hand wheel manually until needle point is just above button.
4. Set stitch selector at desired zigzag stitch position so needle will enter one hole of the button.
5. Turn hand wheel again by hand so needle enters second hole. Reset stitch selector if necessary. Stitch a number of times.
6. Finish sewing with an extra two inches of thread remaining. Draw these threads to reverse side of garment and tie.

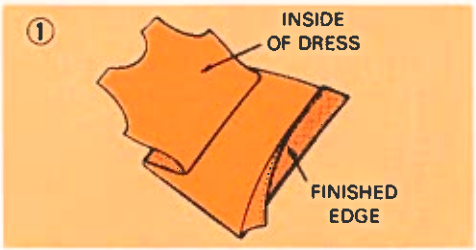
When sewing a flat button, place needle or pin between holes of button as shown to provide flexibility for buttoning.



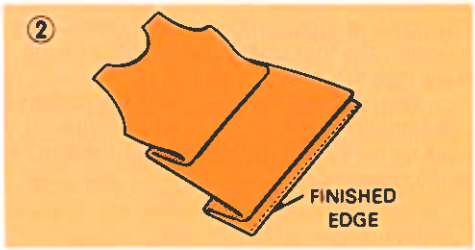
BLIND HEMMING


Pressure regulator
See page 12.
Stitch selector
Presser foot
Zigzag foot
Stitch length dial
Within green zone
Kenmore
For easier blind hemming it is recommended to use optional accessory item 6885 — adjustable blind hem foot.

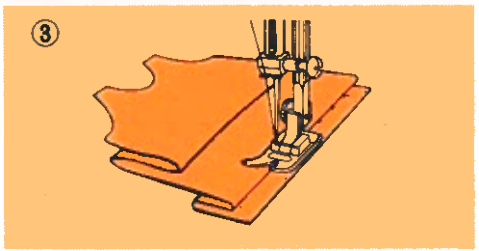
PROCEDURE



Finish edge of hem anyway you desire. Turn up hem appropriate width.



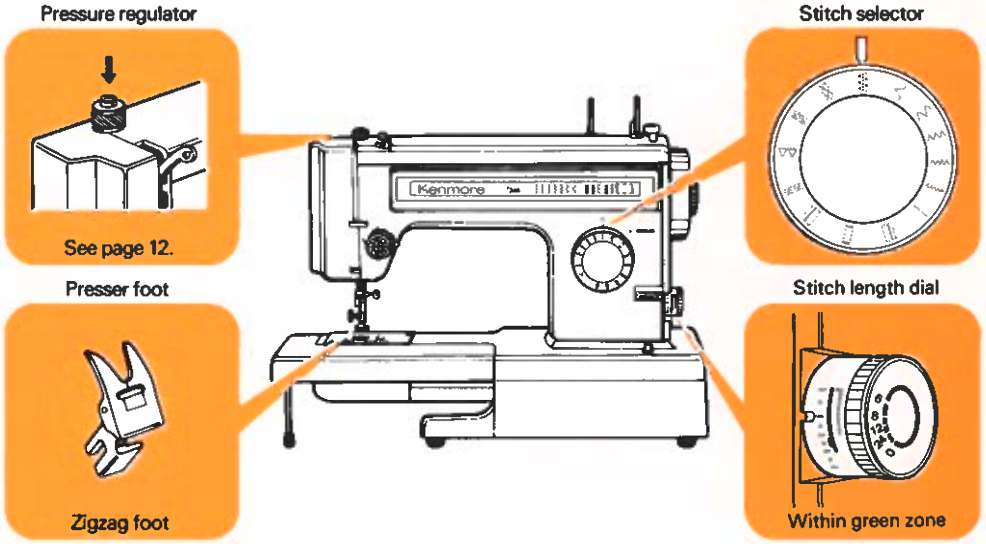
Fold garment away from hem leaving 1/8" of hem edge extending.



Place garment under presser foot in such a manner that straight stitches will be sewn on extended edge. The zigzag stitch should just catch the fold of the garment.

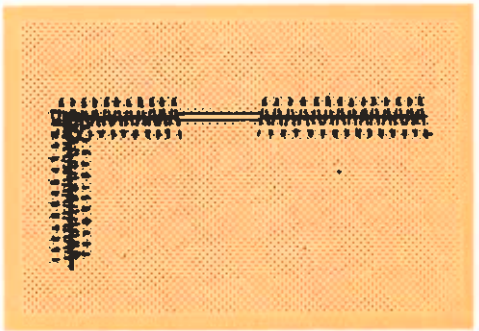
Press both sides of the finished hem. The right side of the garment will show only the blind stitches.

MENDING AND OVERCAST STITCHING (THREE-STEP ZIGZAG)



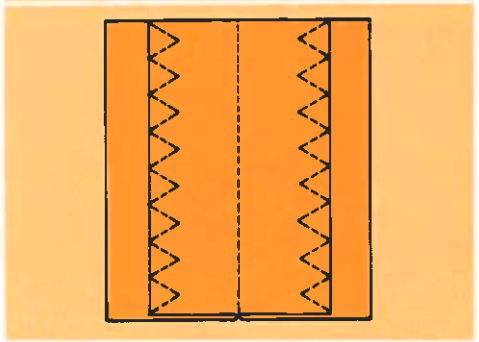
MENDING

To repair a straight or three-cornered tear, position the tear under the needle in such a way that the stitching catches both sides of the tear. When mending a three-cornered tear, stitch from each end to the center. It is well to use a piece of fabric under the tear for reinforcement.

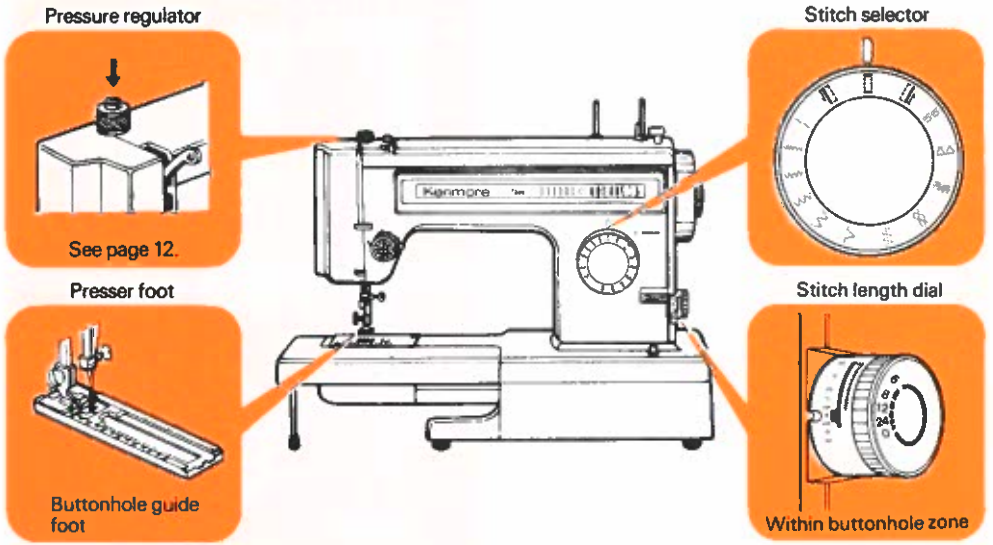


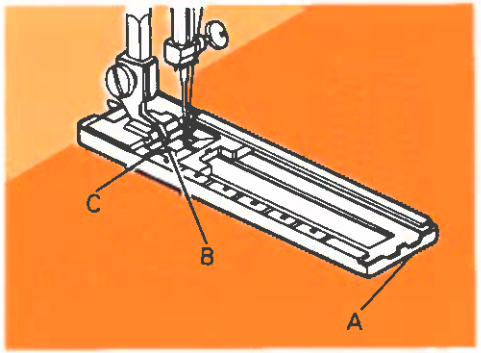
OVERCASTING WITH MENDING STITCH

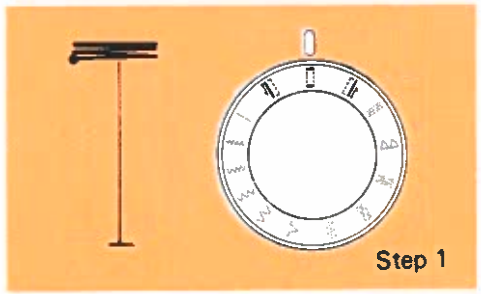
Three-step zig-zag is a strong stitch because, as its name implies, it takes three short stitches where normal zig-zag takes one. For this reason it is highly recommended for overcasting, i.e. finishing a raw edge, on all types of fabric.



BUTTONHOLE MAKING







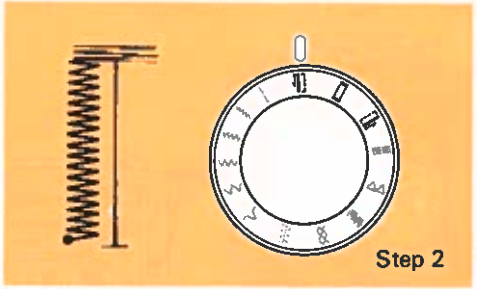
PREPARATION

Carefully mark the buttonhole length on your garment. Place the fabric with the buttonhole marked under the buttonhole foot. Pull the guide foot (A) all the way forward so that the index mark (B) is aligned with the graduation (C), with thread to rear. (Reproduction of the identical size buttonholes is facilitated with the aid of the graduations on the left side of the buttonhole guide foot. These graduations are 1/8" apart. Graduations act as reference mark.)

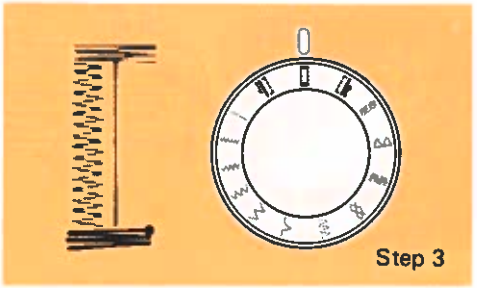
PROCEDURE

Set stitch selector at ▯ and sew several times at the marked beginning of the buttonhole. Stop sewing at the left stitch. Raise needle to its highest position by turning handwheel toward you manually.

Set stitch selector at . Stitch forward until you approach the front marking of the buttonhole. Stop sewing at the left stitch and raise needle to its highest position.

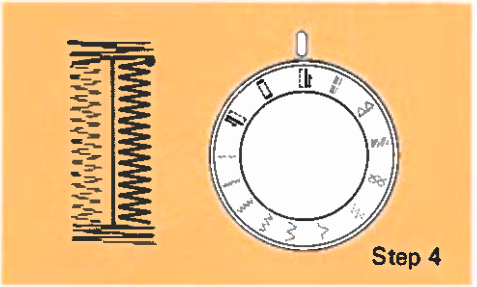


Set stitch selector at again and sew several times. Stop sewing at the right stitch and raise needle to its highest position.



Set stitch selector at and finish buttonhole.

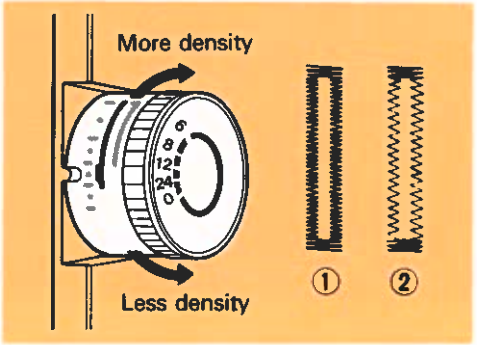
Use buttonhole opener provided in accessory box to open buttonhole.

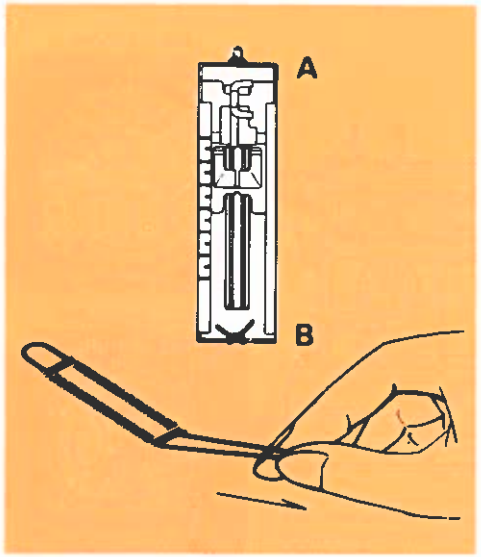


ADJUSTING STITCH LENGTH

Depending upon the fabrics on which you are sewing, or your own preference in buttonholes, you may alter buttonhole stitch density by varying the original stitch length setting within the green zone.

1. For more density, turn the dial away from you.
2. For less density, turn the dial toward you.





CORDED BUTTONHOLES

Hook filler cord (crotchet thread or buttonhole twist) to the spur (A), pull both ends of cord forward under foot and tie to the spur (B). Sew buttonhole in such a way that zigzag stitches cover the cord.

When stitching is completed, release cord from foot, pull ends of cord and snip off extra length.

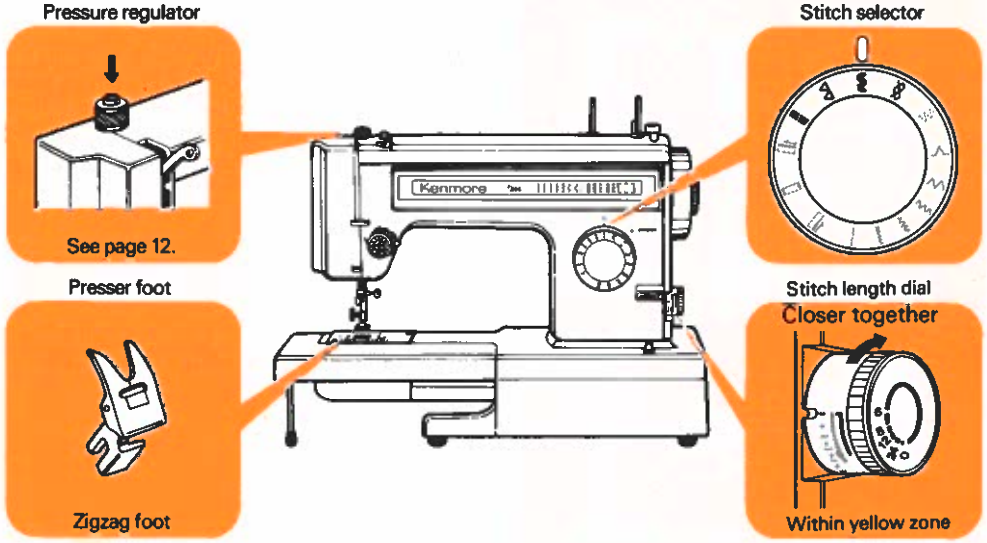
TIPS ON BUTTONHOLING

Always make a practice buttonhole on a scrap of fabric you plan to use. Try the buttonhole with the button you will use.

Always use an interfacing in area of garment where buttonholes are placed. Tissue paper or regular interfacing can be used. Tear paper away after stitching, if it is used.

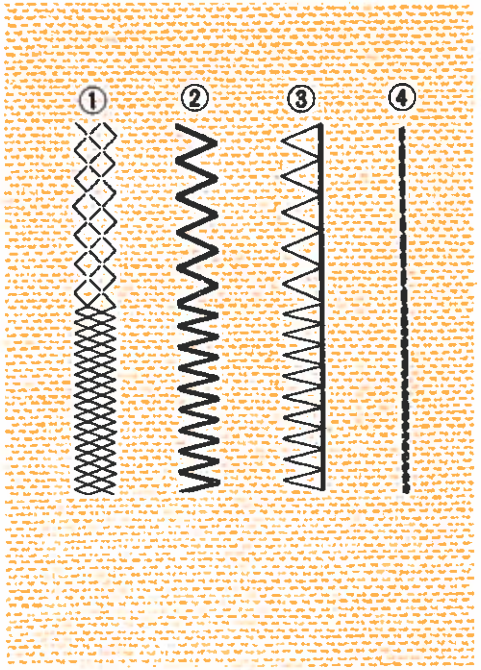
For heavier weight fabrics, loosen your top thread tension slightly.

STRETCH STITCHES



The stitches shown at left are all for use with stretch and knit fabrics. These are special stitches built in to the machine for your quick selection.

1. Smocking Stretch
2. Rick-Rack Stretch
3. Overcast Stretch
4. Straight Stretch



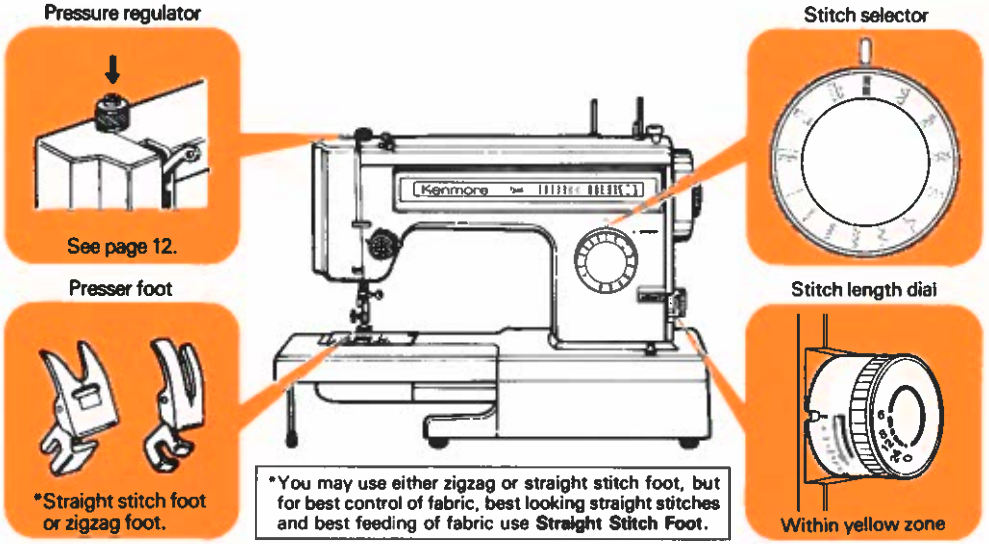
ADJUSTING STITCH LENGTH

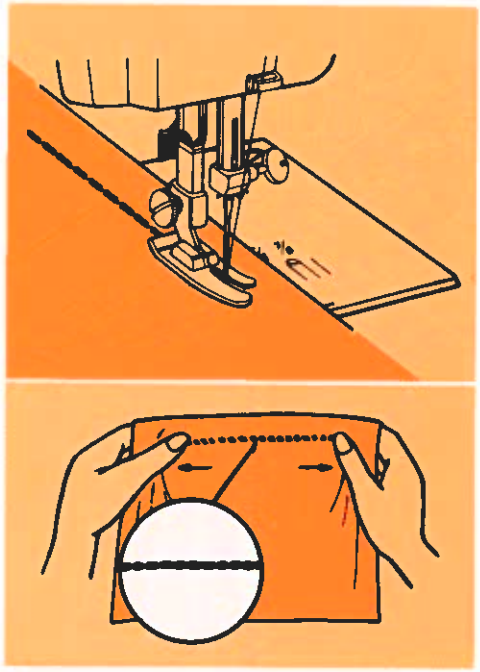
Depending upon your preference in stitch patterns, you may make stretch stitches closer together without changing the balance of stitches by turning stitch length dial away from you within yellow zone.

RECOMMENDATION

1. It is recommended to use "Q NEEDLE"™ and "Q FOOT"™ for sewing on knit and synthetic fabric.
2. It is also recommended to use backing or interfacing for sewing on knit and synthetic fabric.

STRAIGHT STRETCH STITCH


Pressure regulator
See page 12.
Stitch selector
Presser foot
*Straight stitch foot or zigzag foot.
Stitch length dial
Within yellow zone
*You may use either zigzag or straight stitch foot, but for best control of fabric, best looking straight stitches and best feeding of fabric use Straight Stitch Foot.

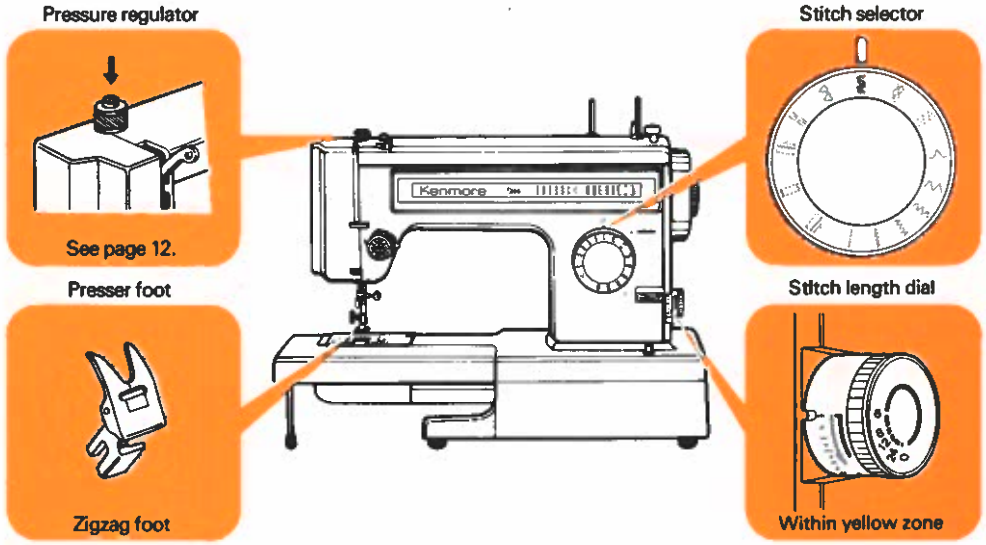


APPLICATIONS

Use this stretch stitch with knit or synthetic fabric. Sew as you do with regular straight stitch.

This is also a good stitch to use on curved seams regardless of the type of fabric. Any seam that will receive a great deal of strain when worn should be sewn with the stretch stitch. Use in children's shorts and slacks as well as adult sports clothes.

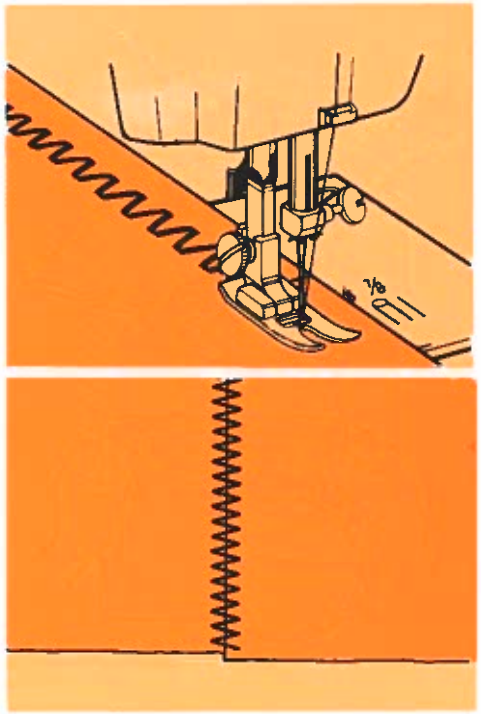
RICK-RACK STRETCH STITCH



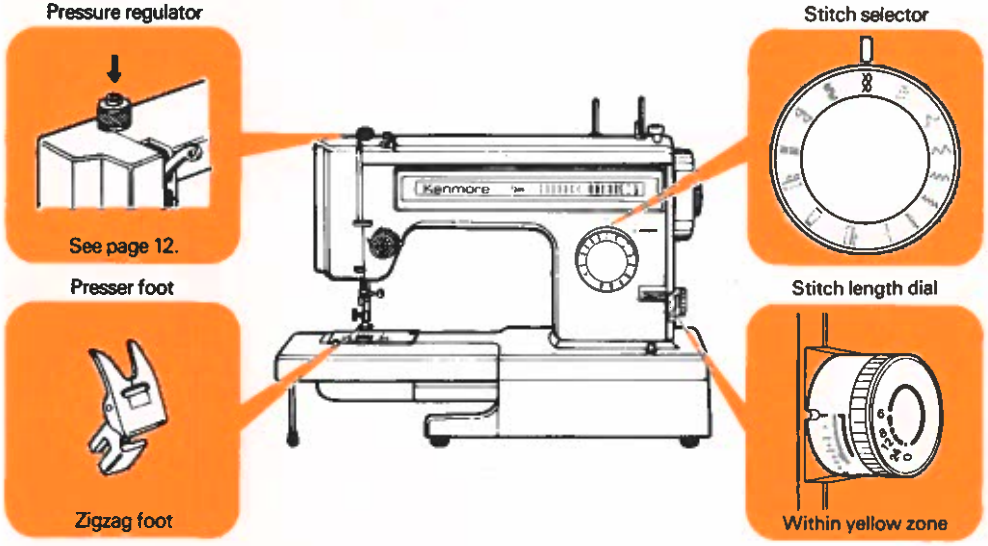
APPLICATIONS

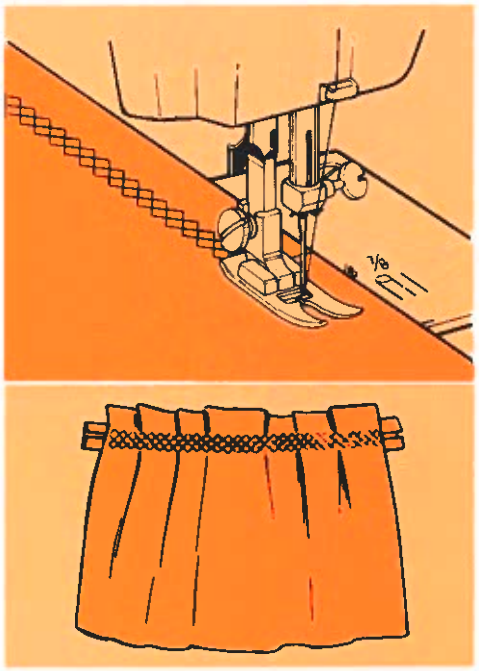
Sew on stretch fabrics in any area that you might use a zig zag stitch. This stitch can be used as a decorative top stitch as well.

It is useful also on lapped or abutted seams where you lap one edge of a seam over another with seamlines meeting in the center.



SMOCKING STRETCH STITCH



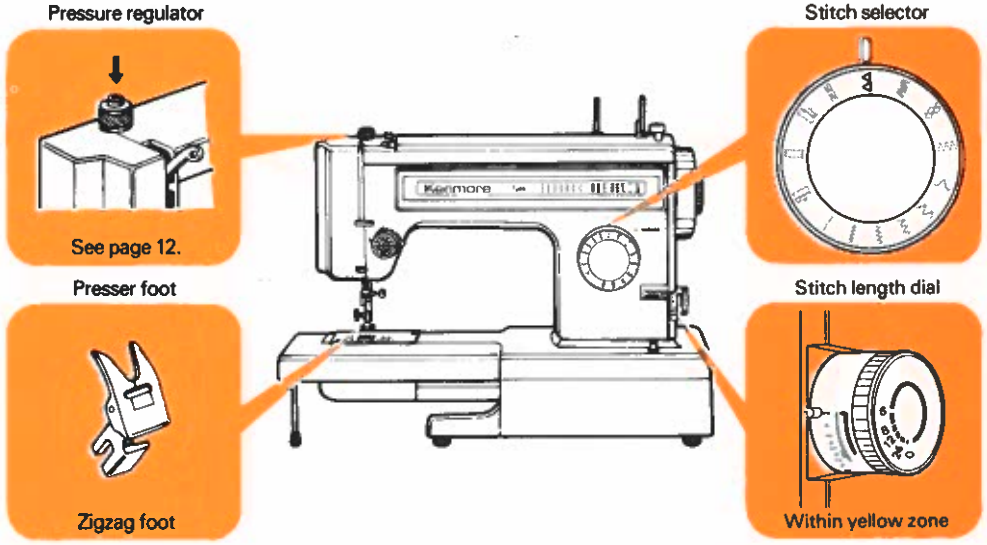


PROCEDURE

1. Make a straight line of gathers across the fabric that you wish to smock.
2. With a narrow strip of fabric directly under the line of gathering, stitch over the gathers. The design will be a series of small diamonds.

Note: When smocking a garment, the stitching should be done before the piece is sewn into the garment.

OVERCAST STRETCH STITCH

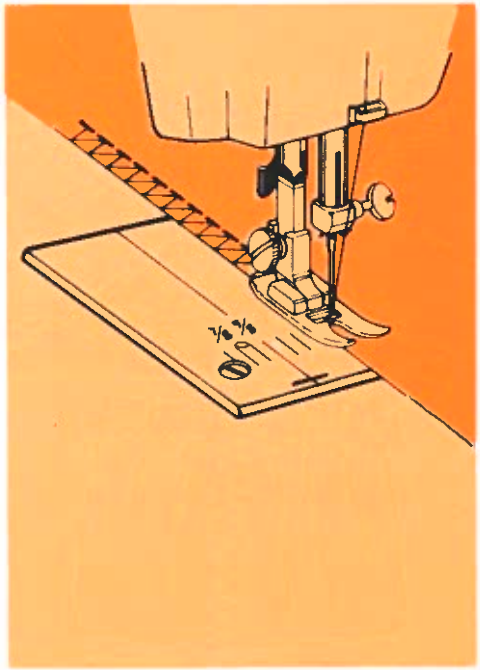


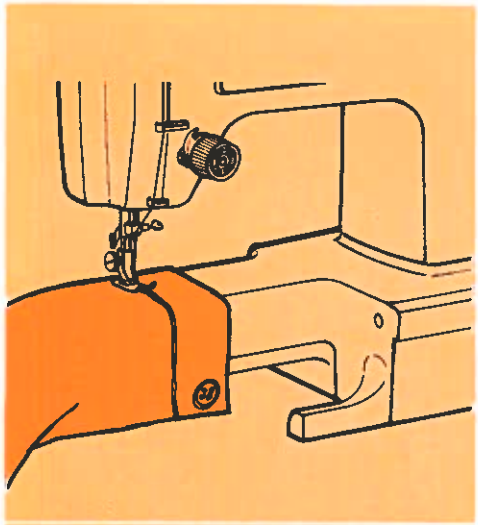
APPLICATIONS

This is the same type of stitch used by the garment industry in making sportswear. It is used for seams of 3/8" to 1/4". The seam is formed and finished in one operation. It must be used when you are making swimwear, ski pants and other garments that require stretch.

Stitch so the needle pierces the fabric just short of the outside edge.

Raw or worn edges of older garments can be overcast to prevent further raveling.





FREE-ARM SEWING

Your Kenmore sewing machine is easily converted from a traditional flat-bed to a contemporary free-arm sewing machine by removing extension table.

The free arm enables you to sew tubular types of pieces more easily. Just slip the sleeve or pants leg on the free arm as shown.

You will find many uses for this free arm feature such as:

1. Mend elbows and knees of garments more easily.
2. Sew in sleeves more easily. This is especially true when sewing smaller garments.
3. Applique, embroider or hem around edges of cuffs or pants legs.
4. Sewing in elastic casings in skirts or pants at the waistline.

Checking Performance Problems WHAT TO DO

PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	Incorrect size needle. Improper threading. Loose upper thread tension. Pulling fabric. Light pressure on presser foot. Loose presser foot. Unevenly wound bobbin. Nicks or burrs on shuttle hook. Nicks or burrs at hole of needle plate.	Choose correct size needle for thread and fabric. Rethread machine. Tighten upper thread tension. Do not pull fabric; guide it gently. Increase pressure on presser foot. Reset presser foot. Rewind bobbin. Replace shuttle hook or polish off burrs completely. Replace needle plate, or polish off burrs completely.
Breaking Needle	Pulling fabric. Incorrect size needle. Incorrect setting of needle. Loose presser foot.	Do not pull fabric; guide it gently. Choose correct size needle for thread and fabric. Reset needle. Reset presser foot.
Bunching of Thread	Upper and lower threads not drawn back under presser foot before starting seam.	When starting a seam be sure to draw both threads under and back of presser foot about 4" and hold until a few stitches are formed.
Puckering	Incorrect thread tension(s). Light pressure on presser foot. Using two different sizes or kinds of thread. Bent or blunt needle. Loose presser foot. Fabric too sheer or too soft.	Reset thread tension(s). Increase pressure on presser foot. Upper thread and bobbin thread should be same size and kind. Insert new needle. Reset presser foot. Use underlay of tissue paper.

PROBLEM	PROBABLE CAUSE	CORRECTION
Skipping Stitches	Incorrect size needle. Certain knits and synthetics. Bent or blunt needle. Incorrect setting of needle. Tight upper thread tension. Light pressure on presser foot.	Choose correct size needle for thread and fabric. Use "Q NEEDLE" and "Q FOOT". Insert new needle. Reset needle. Loosen upper thread tension. Increase pressure on presser foot.
Breaking Upper Thread	Starting to stitch too fast. Improper threading. Tight upper thread tension. Incorrect size needle. Sharp eye in needle. Nicks or burrs on shuttle hook. Nicks or burrs at hole of needle plate.	Start to stitch at a medium speed. Rethread machine. Loosen upper thread tension. Choose correct size needle for thread and fabric. Insert new needle. Replace shuttle hook or polish off burrs completely. Replace needle plate, or polish off burrs completely.
Breaking Bobbin Thread	Improper bobbin case threading. Tight bobbin thread tension. Lint in bobbin case or shuttle.	Check bobbin case threading. Loosen bobbin thread tension. Clean bobbin case and shuttle.
Fabric not Moving	Feed cover plate attached. Light pressure on presser foot. Thread knotted under fabric. Stitch length dial is not set within yellow zone when stretch stitching.	Remove feed cover plate. Increase pressure on presser foot. Place both threads back under presser foot before beginning to stitch. Reset stitch length dial within yellow zone.
Machine Jamming Knocking Noise	Thread caught in shuttle.	Disassemble and clean shuttle.

CLEANING AND OILING

Fig. 1 Cleaning the feed dogs with a brush.

To insure the best possible operation of your machine, it is necessary to keep the essential parts clean at all times. Open shuttle access cover and remove needle plate with large screw driver. Then using a small brush, remove the lint that accumulates in the shuttle area and around the feed dogs.

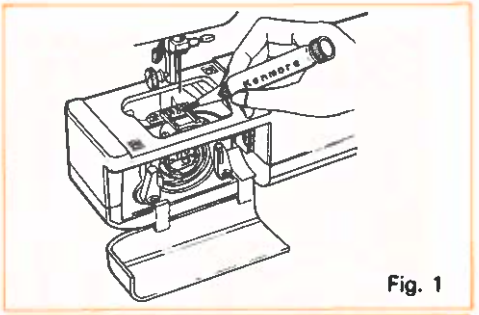


Fig. 1

Fig. 2 Parts of the Shuttle Assembly

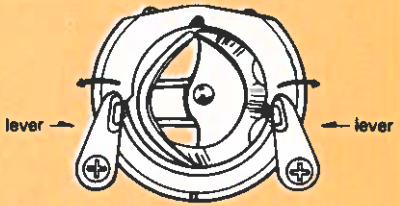
To Clean the Shuttle Area:

1. This area must be kept free of dust, lint and occasional tangled thread. Raise the needle bar to its highest point and remove the bobbin case.
2. Push levers of shuttle race aside and lift shuttle race cover and shuttle out.
3. Clean the shuttle race with small brush.
4. Put a drop of Kenmore sewing machine oil only on the center pin of the shuttle and shuttle race (see arrows on two bottom illustrations).

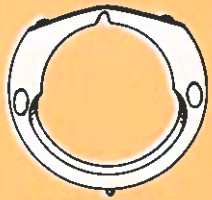
To Replace Shuttle Assembly:

1. Position shuttle race as illustrated so that race is forming half moon on the left side of the machine.
2. Hold shuttle by center pin and position shuttle so as to form a half moon on the right side. Pointed hook will be on the bottom.
3. Place shuttle race cover into place over shuttle assembly.
4. Snap the levers into position.

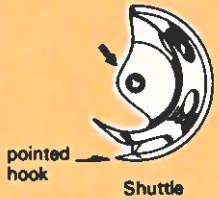
Note: Oil and lint brush No. 6889 is available at most Sears retail stores and catalog.



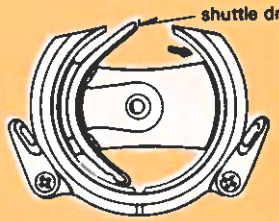
Shuttle Assembly



Shuttle Race Cover



Shuttle

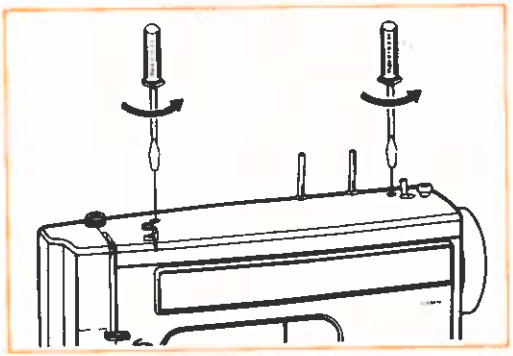


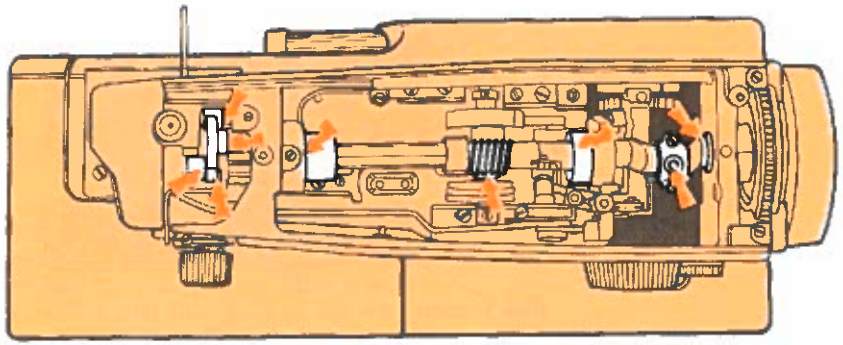
Shuttle Race

Fig. 2

OILING UNDER ARM COVER PLATE

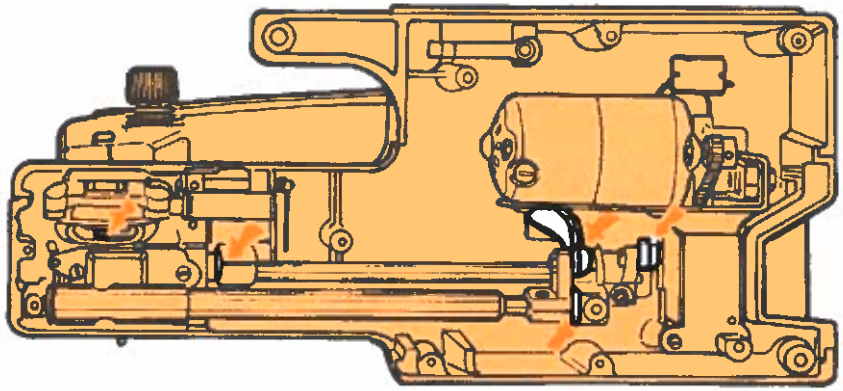
Remove arm cover plate to oil points indicated by arrows in top of machine head. Use one to two drops of Kenmore sewing machine oil at each part. To remove cover plate, loosen up two top screws and lift the cover plate as illustrated below.

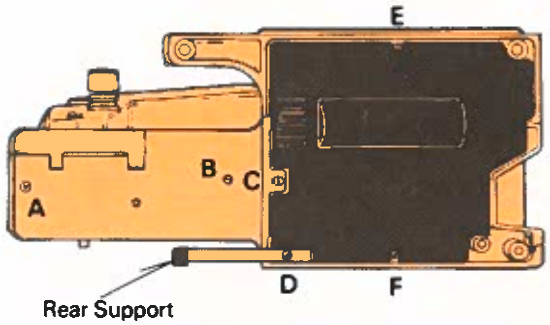




OILING UNDERSIDE

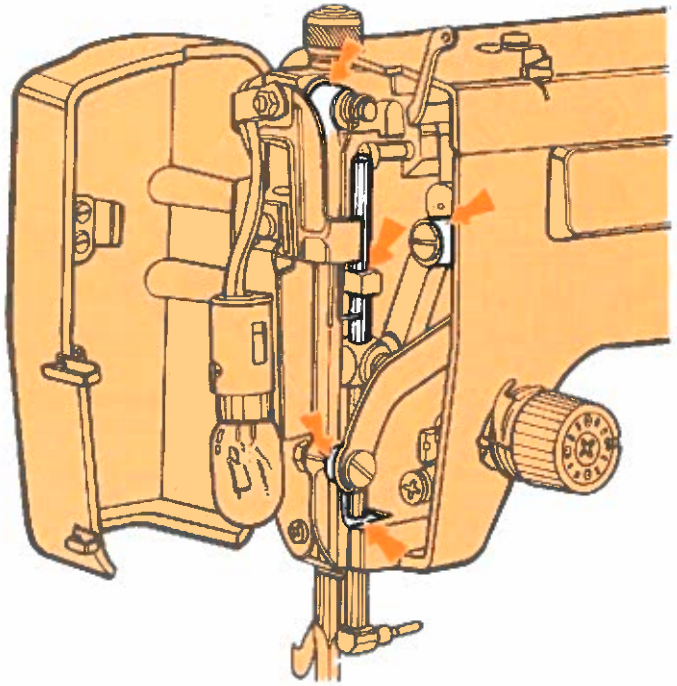
Tilt machine head back and remove bottom covers and rear support to oil points indicated by arrows on underside of machine. To remove bottom covers and rear support, remove screws (A), (B), (C), (D), (E) and (F) as shown below.





OILING IN FACE COVER PLATE

Swing face cover plate open and oil points indicated by arrows in illustration.

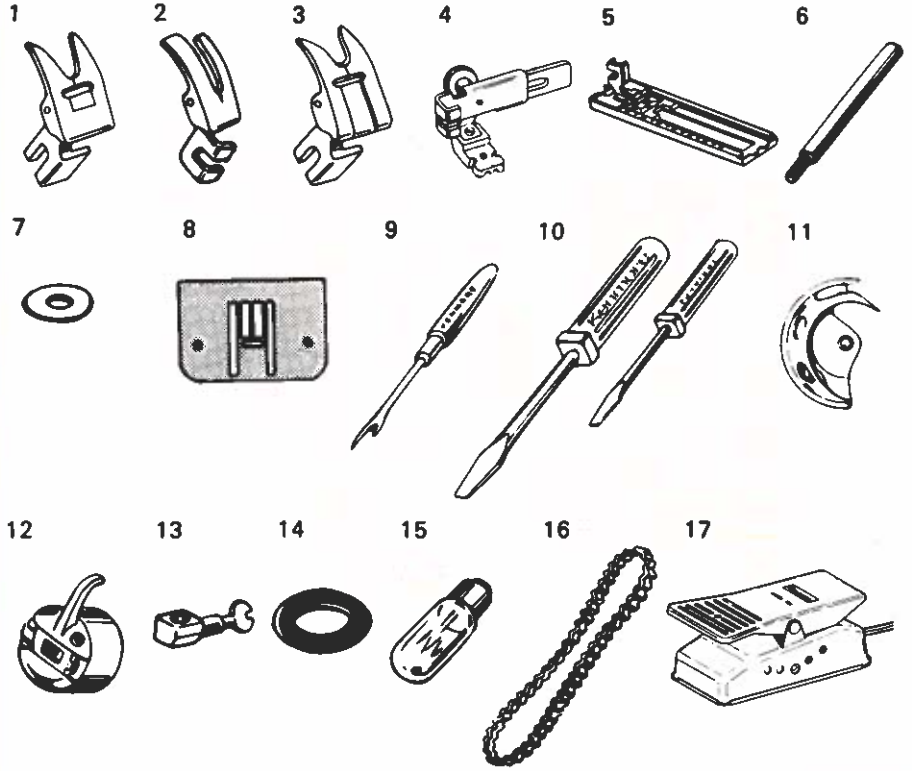


CHANGING LIGHT BULB

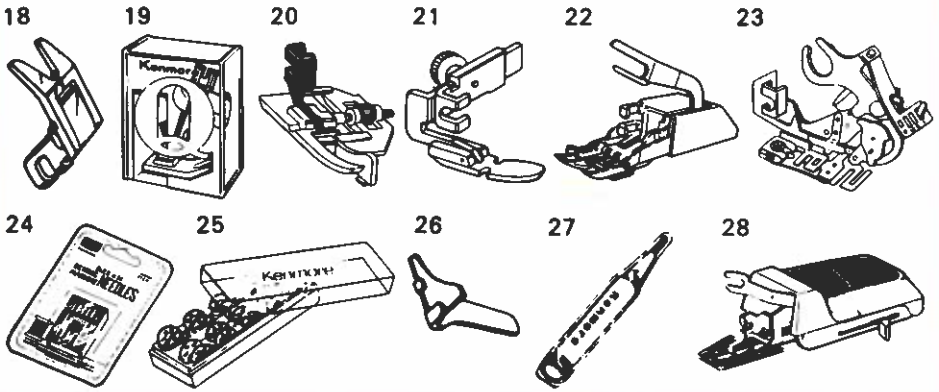
The sewing light is located inside the face cover plate as shown. To replace the bulb, push switch to off, unplug machine and swing the face cover plate open. Push up on the bulb slightly and turn bulb to the left. Withdraw bulb from socket. Push in new bulb and turn to the right.

PARTS LIST

PARTS AND ACCESSORIES PROVIDED WITH MACHINE



OPTIONAL ACCESSORIES



PARTS LIST (Use only genuine Kenmore replacement parts and accessories.)

All parts listed herein may be ordered from any Sears, Roebuck and Co. store or service center.

WHEN ORDERING REPAIR PARTS, ALWAYS GIVE THE FOLLOWING INFORMATION:

1. PART NUMBER
2. PART DESCRIPTION
3. MODEL NUMBER shown on the nomenclature plate. (See page 3 for location.)
4. NAME OF ITEM

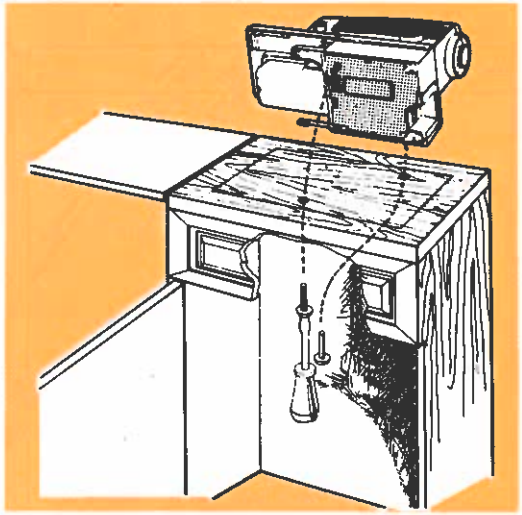
If the parts you need are not stocked locally, your order will be electronically transmitted to a Sears Repair Parts Distribution Center for expedited handling.

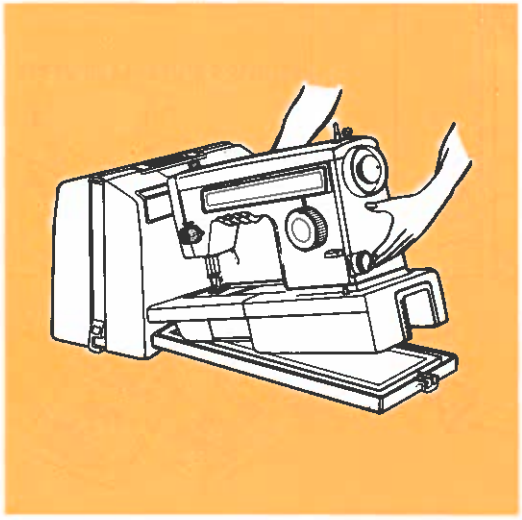
Ref. No.	Part No.	Description
1	40390	Zigzag presser foot
2	6873	Straight stitch foot
3	6870	Satin stitch foot
4	6757	Zipper foot
5	47149	Buttonhole guide foot
6	8286	Thread spool pin
7	2273	Nylon disc
8	45846	Darning plate
9	6830	Buttonhole opener
10	41670	Large screw driver
	41669	Small screw driver
11	47	Shuttle
12	6510	Bobbin case
13	36353	Needle clamp with screw
14	1939	Bobbin winder rubber ring
15	6797	Light bulb
16	40164	Large motor belt
	56973	Small motor belt
17	6811	Foot control
18	6782	"Q FOOT".
19	6882	"Q SET".
20	6885	Blind hem foot
21	6792	Hinged zipper foot
22	6887	Even feed foot
23	6891	Ruffler pleater

Ref. No.	Part No.	Description
24	6550	No. 9 needles
	6551	No. 11 needles
	6552	No. 14 needles
	6553	No. 16 needles
	6554	No. 18 needles
	6746	"Q NEEDLE".
25	6862	10 bobbins in case
26	6864	Needle threader
27	6889	Oiler-brush combination
28	6736	Automatic buttonholer makes 3 styles in 10 sizes
	6840	Accessory set (not shown) for heming, edgestitching, binding, gathering, quilting, attaching braid, lace, zippers incl. "Q SET".

YOUR SEWING PLACE IS ALWAYS READY WITH SEARS KENMORE SEWING FURNITURE

A full-line of sewing cabinets is available at your nearest Sears retail store or through our general catalog. Whenever you're ready to sew, so is your sewing place. Another option... buy a Carrying Case... then your Kenmore goes anywhere, can be stored anywhere.





WARRANTY

FULL 25-YEAR WARRANTY ON SEWING MACHINE HEAD

For 25 years from the date of purchase, Sears will, free of charge, repair defects in material or workmanship which appear in the sewing machine head.

FULL TWO YEAR WARRANTY ON ELECTRICAL EQUIPMENT OF SEWING MACHINE

For two years from the date of purchase, Sears will, free of charge, repair defects in material or workmanship which appear in the electrical equipment of the sewing machine, including motor, wiring, switch and speed control.

FULL 90-DAY WARRANTY ON ALL PARTS AND MECHANICAL ADJUSTMENTS

For 90 days from the date of purchase, Sears will, free of charge, replace any parts and provide mechanical service necessary for proper operation of the sewing machine, except for normal maintenance.

To obtain warranty service described above, SIMPLY CONTACT THE NEAREST SEARS STORE OR SERVICE CENTER IN THE UNITED STATES. This warranty applies only while this product is in use in the United States.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

SEARS, ROEBUCK AND CO., Dept. 698/731A, Sears Tower, Chicago, IL 60684